

# **<Linked In> Locked Out**

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The informal participation hierarchy and the discursive  
patterns of top contributors in the April 6th Youth  
Movement Facebook group

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2010

Master's Thesis for Consideration in the Institute of Media and Communication at the  
University of Oslo

2010

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A thesis submitted for partial fulfilment of a master's in philosophy in media studies

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## *FOREWORD*

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This paper would not have been possible without the inspiration supplied by the tens of thousands of men and women in Egypt who devote their time, and sacrifice their safety, to press for change in the country that they love. The financial aid provided by Fritt Ord made it possible for me to relocate to Cairo and conduct my research from the epicenter of the conflict being addressed by the group I was researching. This first-hand experience from within the Egyptian political context, enhanced my understanding of both the import and function of the April 6<sup>th</sup> Youth Movement. The invaluable aid provided by engaged members at the Institute of Media and Communication at the University of Oslo made the research conducted here stronger and the process far more enjoyable. These individuals include, but are not limited to, my thesis advisor Dr. Terje Rasumussen and my peers: Velaug Hobbestad, Luisa Klaveness, Mats Silberg, and Christopher Wilson. Their feedback and willingness to listen to my ideas, concerns, and verbalized neuroses was crucial and admirable. Though I credit them with their assistance, any errors or omissions in the following paper are mine and mine alone.

## *ABSTRACT*

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The present study seeks to address the development of new online social groups in the context of a repressive offline environment. More specifically, it seeks to quantitatively assess the structure of a single, large, politically-focused online group to analyze the group's participatory structure. Developing a picture of this participatory structure will potentially uncover patterns of behavior and a distribution of participation within a group that, while technically open, is potentially dominated by a small group of users. The second portion of the present study's analysis centers on an exploration of hyperlink usage whereby hyperlink activity is qualitatively categorized by the web page to which a user hyperlinks from the group's main web page. This hyperlink analysis will explore the relationship between the group itself and the larger information environment on the internet. Patterns of usage, specifically the relationship between the categories of hyperlinks and the level of participation of the user that posts a given link will be used to assess the degree to which an elite group of "opinion leaders" develops in an open online group and the extent to which that group of "opinion leaders" sets the discursive agenda by linking to particular categories of web pages at varying rates.

The group at the center of the present study is the April 6<sup>th</sup> Youth Movement group, hosted on Facebook. The findings in the following study affirm previous research in the social sciences and uncovers a pattern of power law distribution of contribution, whereby a small number of individuals are responsible for an exponentially higher amount of participation than others. This small group of individuals is at the helm of a group of 75,000 members, of which only .05 percent engaged actively at all with group during a two-week constructed sample. This small group of active users were also responsible for posting significantly more content that referred other members to other web pages inside the movement's information sphere. These findings are significant because they undercut conclusions that point to the online discursive sphere as a potential alternative to a traditional offline sphere that is closed off to much of the population.

The methodology in this thesis is set apart from previous research because it takes a case study approach to the sample – by selecting a single group to track – but applies a quantitative hyperlink analysis to more clearly analyze the group's structure and activity. The methodology is a unique blend of quantitative – analyzing all output of a group in a



constructed sample – and qualitative – coding hyperlinks into qualitative categories for further comparison.

The findings of the thesis are perhaps disappointing to those who envision an online public sphere as the solution to many problems for freedom of expression and association in authoritarian-controlled societies. If discursive online spheres are commandeered by a select few who set the agenda for an amorphous and inconsistently committed group of users, the potential for coordinated offline activity or coherent discussion of wider social problems seems limited. Further study of other groups within the political sphere of Egypt, the MENA region, and the world are necessary before any conclusion can be drawn concerning group structure.

## CHAPTER 1: INTRODUCTION

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The present study focuses on social media as a platform of discussion in the context of a repressive political environment. Online social media platforms have developed in popularity in recent years, and have offered a technological arena for discussion for individuals with internet access. As the online information environment has diversified with the creation of blogs, online news media, and multimedia sharing, alternative information sources have presented themselves in societies that have traditionally suffered from a lack of information controlled by government control. These developments have led to a litany of research projects that highlight potential applications of new technology and the possibility of an opening up of a public sphere of discussion.

Much of the research conducted on social media networks, and particularly Facebook, have been conducted on the sites' use within the Western spheres, particularly the United States and western European countries. Online journalism originating in the Middle East, blogs in particular, has been the subject of study.

The present study seeks to blend the study of online alternative information with the social media tools that have been used to spread awareness of these sites through hyperlinking. The aim of this research is to explore the quantitative relative volume of activity of individual users within a particular Facebook group. Through this quantitative analysis of the activity that takes place in this group, an understanding of the diversity of level of participation will hopefully be found. In addition to this quantitative analysis of the group's activity, a qualitative evaluation of the hyperlinks posted to the group's common discursive space will inform an analysis of the types of information that the group members choose to post on the group's site and how the types of activity correlate with the volume of participation.

The potential impact of social media is often hyperbolically discussed especially as it relates to the organization of individuals seeking to openly address issues with authoritarian regimes. This organization has been heralded as a sea change in political dynamics, but little research has been conducted to analyze a particular group to better understand how an individual's activity relates to the group's activity overall. The present study seeks to connect hyperlink analysis, qualitative analysis of the types

of hyperlinks posted on a social media group's web page, and quantitative analysis of individual member participation to more clearly understand how the structure of a political group relates to the types of information shared and if this information comes from sources outside of traditional media in the offline sphere.

The present study seeks to discover the degree to which the selected group uses the social media platform to share information and the degree to which that information encourages discussion among members. The aim is to more concretely examine a single group and shed more light on the role of social media in the formation of an alternative information environment for those engaging in political activism.

The main impetus for my choosing this topic is my interest in the re-appropriation of western social media tools in different contexts. While Facebook is used in the west as a largely social tool that complements offline social networks, the site, as it has gained popularity in other regions of the world and offered in other languages, has been used in different ways. In Egypt, the country of focus in the present study, the site has been used as a political organizational tool. The fact that it is based in the west and has surged in popularity, the regime in place cannot shut down its services without receiving negative international attention. The site's unique ability to coordinate the networking of entire online populations makes its potential as a forum for discussion high and its threat to closed information systems strong. By coupling hyperlinking – a form of online republishing – and connecting a vast network of individuals, groups with similar interests can pool resources and search the web collectively to better access pertinent information for organizing against institutionalized repression.

The methodological approach of this research is both quantitative and qualitative. A two-week constructed sample of all activity that takes place on the Facebook group's wall will be collected and sorted. This information will be separated by each individual action, logged as a particular type of action (that is defined on Facebook) and then assigned a weight that is dependant upon the degree to which that action is active or passive. After the two-week constructed sample is completed, the overall activity of each individual will be given an aggregate value of all activity that has taken place. The hyperlinks posted during the two-week constructed sample will

then be categorized by the type of web page that the hyperlink is connected to. The proportion of hyperlinks in each category will be compared to the total activity of each user that posted the hyperlink and the relative frequency of each category of hyperlinks will be calculated.

In addition to the two-week constructed sample, an additional day of data was collected because of a political candidate's quick ascension to popularity on Facebook and his speculated challenge to the Mubarak regime. This day of data will be analyzed separately, but in the context of the two week constructed sample.

## *CHAPTER 2: HISTORICAL-POLITICAL BACKGROUND IN EGYPT*

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Though a detailed history of the political structure in Egypt is outside the purvey of this paper, a brief outline of the development of the current executive branch is important. It reveals the extent to which action in the official political sphere is reserved for a small, powerful minority, and the extent to which the public is excluded from legitimate political action.

### *EGYPT POST-MONARCHY: FROM NASSER TO MUBARAK*

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#### *GAMAL ABDUL NASSER*

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In a 1952 military coup d'état, the British controlling forces were largely expelled and the monarch, King Farouk, exiled. The country was briefly headed up by General Mohamed Nagib but within eight months, Colonel Gamal Abdul Nasser ascended to the presidency. Nasser ruled from 1954 until his death in 1970. During his tenure as president he, through the drafting of the 1964 constitution, solidified the executive branch's control over the legislature. (Kassem, 2004: 18-20) With sweeping socialist reforms, the nationalization of the Suez Canal, and the complete eviction of the British forces from Egyptian bases, Nasser gained popularity. (Kassem, 2004: 13)

The more popular he became the more steps he took to cordon off the political sphere from those outside of his hand-picked elite. He created the Arab Socialist Union and permitted only its members to run for political office. After establishing the Supreme

Constitutional Court in 1969, Nasser prevented its judges from gaining independence by requiring that they either join the ASU or be dismissed. (Kassem, 2004: 19) Nasser further strengthened the authority of the executive by subjecting all other elements of governmental bureaucracy to it and in the process other branches of government atrophied, leaving a unilateral structure where the executive branch was the strongest, and largely only, governmental body in Egypt<sup>1</sup>.

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### ANWAR AL-SADAT

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After Nasser's death in 1970, Anwar Al-Sadat ascended to the presidency and continued with this trend of the strengthening of the executive at the expense of the functionality of other branches of government. The 1971 constitution, still in effect today, "legally enshrines the preeminent position of the president over other government and state institutions in contemporary Egypt." (Kassem, 2004: 25)

Under Nasser, the Arab Socialist Union was not classified as a political party but rather was conceived as an organizational arena to encompass all legitimate political activity (Kassem, 2004: 51) Sadat took Nasser's monopolization of legitimate political activity one step further: He established a pseudo-multi-party system and created his own political party – the National Democratic Party (NDP) in 1976. The establishment of the NDP and the multi-party system provided an air of legitimacy to the political structure of Egypt, thereby encouraging international investors. But the goal was clear: "Sadat's objective was to ensure a transition from a weak single-party system to an equally weak multi-party system." (2004: 54) With the establishment of the NDP, the executive became intrinsically tied to the ruling legislative party. According to Alaa Al-Din Arafat, "When Sadat founded his own party he robbed Egypt of the chance to disengage the powerful executive branch from the party system." (2009: 14) Hosni Mubarak, who ascended to the presidency in 1981 after the assassination of Sadat, continued this consolidation of power.

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### HOSNI MUBARAK

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<sup>1</sup> "The formal branches of government remain subservient to the overwhelming domination of the executive, and the development of autonomous groupings and constituencies remains hindered and weak." (Kassem, 2004: 1)

As president from 1981 until the present Hosni Mubarak, a military trained leader, has maintained and strengthened the power of both the office of the presidency and the power of his own political party. He has severely limited the creation of new political parties, the work of non-profit groups seeking to document government failings, the publication and broadcast of unflattering information, and the challenge of any political opponents in presidential races. During Mubarak's rule, the public sphere has been completely sealed off to forces outside of the regime and its political party, but it took the work of his post-monarchic predecessors, Nasser and Sadat, to make it possible.

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#### MODERN EXECUTIVE BRANCH

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The government is still controlled by President Hosni Mubarak and his dominating party the National Democratic Party<sup>2</sup> (NDP) who have ruled under a state of emergency since Mubarak's ascent to power. Under the auspices of emergency rule, Mubarak retains the right to detain individuals and imprison them for an indeterminate amount of time without charging them with any crime – an executive privilege that he has consistently used to silence activists, critical journalists, and oppositional party leaders that develop too much popularity. (Ibrahim et al, 2003: 9-10)

Current economic conditions (a high unemployment rate, rampant poverty, metropolitan overcrowding, and a tourist industry negatively affected by highly publicized terrorist attacks) have led to a growing resentment of the regime that seems increasingly out of touch with average Egyptians.

The entirety of the official political sphere (the parliament and the executive) is inaccessible for those wishing to challenge the regime's strength, or voice alternative viewpoints. Despite an announced multi-party election for the presidency in 2005 with two oppositional candidates<sup>3</sup>, one of whom was arrested immediately before election day<sup>4</sup>,

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<sup>2</sup> The National Democratic Party operates in parliament with an 80 percent majority. Many candidates who run as independents in parliamentary elections often affiliate themselves with the NDP after winning. (Arafat, 2009: 29)

<sup>3</sup> Amendment 76 to permit multi-party presidential elections actually created even more hoops for viable opposition candidates. (Arafat, 2009: 106)

rampant voter fraud ensured Mubarak's victory<sup>5</sup>. The parliamentary election in the same year led to the election of several Independent candidates who are *de facto* representatives of the oppositional Muslim Brotherhood.<sup>6</sup> Despite these superficial inroads, the same parliamentary election also resulted in the re-election of a large majority of the National Democratic Party representatives. (Meital, 2006: 259) And while the NDP continues to hold a strong majority in the legislature, new political parties that might challenge their seats are prevented from forming and running against NDP candidates.

The Political Parties Committee (PPC), the government organization responsible for granting new political parties permission to operate, rejected every application made by new groups during the 1990s (Brownlee, 2: 2002). One party, the National Accord party, was granted a license by the PPC in 2000, but between 1998 and 2004, seven political parties were suspended from participating in the legislature (Kassem, 2004: 58) The oppositional political groups who not entirely suppressed by the executive, are routinely threatened, their key members detained, and their activities monitored. (Kassem, 2004: 58)

According to Arafat:

The pseudo-multi-party system is largely designed to control and manage dissenting voices thereby insulating the executive from outside threat. The multiparty system permits authoritarian regimes to institutionalize and channel dissidents that would otherwise be spontaneous. By providing a controlled forum in which disparate political views can participate like a fenced in playground, the power holders can maintain their activities from a better vantage point than if these opponents were forced to resort to mere clandestine methods. (Arafat, 2009: 16)

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<sup>4</sup> Opposition leader Ayman Nour was released in early 2009 after almost 4 years in prison. (Slackman, 2009)

<sup>5</sup> Though the officially reported turnout was 54%, judges charged with monitoring the polls estimated it at 3%. There were many reports of "ballot stuffing, double voting, intimidation, vote buying, and despicable government abuse." (Arafat, 2009: 113 and 119)

<sup>6</sup> At face value such gains by the Muslim Brotherhood may appear to be democracy in action, but many political scientists speculate that enough Muslim Brotherhood members were allowed to win seats so that Mubarak could continue his dominance of the political sphere by threatening Western powers with an Islamist takeover if they continued to insist on open democratic elections. For further analysis of Arab authoritarian strategies at projecting legitimacy and retaining power see Albrecht and Schlumberger (2004).

Now, with Mubarak, nearly 83 years old, plans for his son to take over after his death or during the 2011 election cycle seem unstoppable. Though there is heavy resistance to Gamal Mubarak taking over the presidency – a monarchy-like event, called “the inheritance” by those who oppose it – there is no group inside the political sphere powerful enough to stop it. (Brownlee 2007)

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## CIVIL SOCIETY

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The fact that the official political sphere is closed off does not preclude an active civil society from providing an alternative space for citizens to voice frustrations, seek recourse for government infringements and failures, and discuss current events and potential solutions. But even civil society is controlled by dominant institutions of traditional power.

In an ideal democracy, “Actors of civil society articulate political interests and confront the state with demands arising from the life worlds of various groups,” (Habermas, 2006: 417). In Egypt, however civil society is dominated by the Muslim Brotherhood and heavily controlled by the very government it, ideally, is supposed to influence.

The state is heavily involved in legislating to control the activities of nongovernmental organizations. Law 84, enacted in 2002, allows the Ministry of Social Affairs to limit and monitor the activities of nongovernmental organizations, and prohibits the formation of labor unions. (Elaasar, 2009: 102)

The regime has required that all nongovernmental organizations receive permission before being established and for all of their activities. Nongovernmental organizations not restricted or outright prohibited by the Mubarak regime are oftentimes heavily controlled by the Islamist<sup>7</sup> Muslim Brotherhood (MB) which has co-opted professional syndicates, unions, private voluntary organizations (PVOs), and non-governmental social services. (Bayat, 2004 156; Zahid and Medley 2006; Simms, 2002: El-Ghobashy, 2008: 1592) The group is banned from seeking political office because of a law prohibiting religion-based party platforms, and has largely been prevented from overtly acting within the highest sphere of government despite a minor presence in parliament. One of the only spaces in the civil sphere that has not been co-opted by the MB or restricted by the executive branch are PVOs that work on a

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<sup>7</sup> In this context, “Islamist” is meant to connote a group that wishes to structure the nation’s penal codes based on the laws outlined in the Quran.



single issue, like human rights and are not structured to campaign for regime change or sweeping political reforms. (Langohr: 2004)

The authoritarian executive and MB-dominated civil society have left little room for the general public to participate in the political and civil arenas. According to Arafat, “By blocking all legal and peaceful avenues of change, Mubarak’s manipulation exposes Egypt to either a revolution or a coup d’état.” (139)

The preceding outline of the development of a powerful executive branch highlights the tight restrictions on political participation. But what of open, public debate about political activity? Is there a space in Egyptian mass media for discussion of political activity, even if it is activity that the public at large cannot participate in? According to Habermas (2006)

“Mediated political communication in the public sphere can facilitate deliberative legitimization processes in complex societies only if a self-regulating media system gains independence from its social environments, and if anonymous audiences grant feedback between an informed elite and a responsive civil society.” (Habermas, 2006: 412)

Next this paper will turn to traditional media outlets and briefly explore the extent to which the public is permitted to debate viewpoints that deviate from the party line of Hosni Mubarak, the National Democratic Party, and the Muslim Brotherhood in mass media.

“...the media are not the holders of power, but they constitute by and large the space where power is decided.” (Castells, 2007: 242)

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## MASS MEDIA IN EGYPT

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### **“Media is power, nowhere more so than in the Middle East.” Lawrence Pintak**

The traditional mass media in Egypt – newspapers, television, and radio – are largely limited by government-regulated censorship, government-encouraged self-censorship, and oppressive licensing laws. (Black, 2008) Most of the largest opposition groups receive no mass media coverage at all. (Langohr, 2004: 188) Article 48 in the 1971 constitution prohibits censorship under normal conditions, but allows for it in matters “relating to public safety or national security during a state of emergency or war.” (Ibrahim, et al, 2003: 4) The Emergency Law that has been in place since 1981 is used by government authorities to

allow for censorship under these provisions. Defamation is codified as a criminal offence, further permitting government interference in media activity.<sup>8</sup>

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## NEWSPAPERS

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The Egyptian government retains a significant amount of control, both direct and indirect, over newspapers. The top three dailies – *Al-Ahram*, *Al-Akhbar*, and *Al-Gumhuriya* – are run by editors appointed by the government. These newspapers are owned and supervised by the Al-Shura Assembly, which is under direct control of the NDP. This control leads them to “promote and propagate the government policies and programs. Moreover, they seldom criticize the most critical issues and decisions of government. Consequently, readers do not view state press as a credible source of news information” (Hamza, 2004: 3). Though they occasionally include news coverage that is critical of government policies, they avoid direct criticism of the Mubarak regime. (Ibrahim et. al., 2003: 6)

Three of the top five oppositional newspapers are weeklies. The two major oppositional dailies receive government subsidy and are representatives of specific political parties and therefore primarily report party policy. (Hamza, 2004: 3) The government directly controls printing and distribution of newspapers and all publications must submit content for review to the appropriate government bureau which retains the right to enact *a priori* censorship. (Ibrahim et. al. 2003: 5) Journalists are also required to be members of the Egyptian Journalists Syndicate, whose elections and chair appointments are heavily influenced by the ruling government. (Ibrahim et. al., 2003: 6)

Despite the government’s control of the major daily newspapers, a new group of newspapers formed by joint-stock companies is gaining popularity. (Pintak 2008) Because of their low circulation numbers and weak financial backing, the government has not overtly attempted to shut them down. (Hamza, 2004: 4) Of these new independent papers, *Al Masry*

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<sup>8</sup> The Press Law enacted in 1996 “prescribes a one-year sentence for defamation or two years if a public official files the suit: journalists also face imprisonment under other, broader Penal Code provision such as those prohibiting ‘the violation of public morality’ and ‘damaging national interest’”. (Ibrahim et. al., 2003: 3-4) “The law allowed for the detention of journalists pending criminal investigations for breaking censorship laws, together with stiffening of the fines and prison sentences imposed for relaying ‘false news’, deemed harmful to the state, public officials, of the economy.” (*Ibid.*)

*Al Youm* shows particular promise to voice public opinion in the traditional mass media. Its circulation – around 200,000 readers per day – is nowhere near the circulation of *al-Ahram*, which distributes one million copies every day and boasts five million daily readers.<sup>9</sup> (Menassat 2009) Despite these circulation numbers, *Al Masry Al Youm* has printed stories critical of the Mubarak regime's human rights record but according to Pintak (2008) still lacks teeth. Yet, it has managed to be more critical of the government than major dailies without being shut down by censors, making it important to take into account when discussing the degree to which traditional mass media in Egypt is controlled by dominant institutions. (Cooper 2008)

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## TELEVISION

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Given the large proportion of Egyptians who are illiterate<sup>10</sup>, television and radio provide an important and influential news source. The Egyptian Radio and Television Union (ERTU), a branch of the Ministry of Information, monitors and controls all domestic radio and television broadcasts. (Ibrahim et. al., 2003: 7; Iskandar et al, 2006: 18) “Unlike print media, where there is at least some criticism of the government, national television rigidly supports the regime and its party.” (Iskandar et al, 2006:20)

The ERTU launched its first satellite television station in 1990. The channel was soon followed by ERTU's launching of the Arab world's first satellite – Nilesat – in 1998. The ERTU controls Nilesat and has permitted the airing of privately owned satellite channels on its airwaves, but with restrictions. It has also allowed foreign satellite channels to be broadcast without censoring their content. (Ibrahim et. al., 2003)

The large barrier of entry for starting a satellite television channel and the ensuing large demand for content, places privately owned broadcasters at a financial disadvantage and often requires of them that they cooperate with the ERTU to meet programming needs and establish adequate financial support. The first privately owned Egyptian satellite channel, Dream TV broadcasts a significant amount of material produced by ERTU and in exchange, the ERTU, and by extension the Ministry of Information, owns a stake in the

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<sup>9</sup> Hamza (2004)

<sup>10</sup> UNICEF estimates that as of 2007, only 72% of Egyptians are literate.

channel. The second privately owned satellite channel, Al-Mewhar reached a similar deal with the ERTU. (Sakr, 2002)

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## RADIO

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The ERTU also produces all domestic radio programming. Foreign broadcasts with limited popularity include Voice of America, BBC Arabic, Kol Israel, and Radio Monte Carlo-Middle East. (Ibrahim et. al., 2003)

As evidenced by the preceding, cursory outline of mass media in Egypt it is clear that the traditional media sphere is lacking a locus for open public debate unhindered by government manipulation. Though the recent emergence of independent newspapers has potential to facilitate more public discussion of national issues and concerns, these newspapers are still in their infancy. A country with a population of 72 million inevitably holds heterogeneous political views and these views must be debated in some media form. News that goes unreported in traditional mass media and debate that goes undiscussed in the official political sphere is now increasingly surfacing online.

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## ONLINE MEDIA

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To access information online, a citizen must not only be literate, but also have access to a computer that can connect to the Internet. Before assessing the online media environment this paper will turn to the Internet infrastructure development of Egypt with particular emphasis on who is connected, how they connect, and what the Egyptian government has done to facilitate, while simultaneously controlling, online activity.

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## INTERNET INFRASTRUCTURE IN EGYPT

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Egypt first established connection to the Internet in 1993 and since then the government has subsidized its growth and subsidizes access. (Fahmi, 2009: 23) Despite this government effort to partner with private organizations to spread Internet use, the Mubarak regime has passed some legislation to graft offline measures of censorship and repression to the online information environment. But the Egyptian government has, when compared to

other Arab regimes,<sup>11</sup> been relatively tolerant of online activity. There are no sweeping control or censorship mechanisms. Officials monitor the internet, harass, detain, and sometimes torture online journalists or activists, make internet connection without registration difficult, but they do not systemically shut down or block offensive web pages as governments in other Arab countries have done. (Hardaker, 2008; Khaled, 2009; Dayem, 2009)

Internet penetration rates rose in Egypt by more than 566% between 2000 and 2005 (Wheeler, 2005), which, in a country with the second largest population in the Arab world equates to vast numbers of users. In actual number of connected citizens, Egypt has the highest number of Internet users in the Arab world. (Hardaker, 2008: 5)

The openness of a networked society poses problems for a government attempting to control public expression because of the potential for the facilitation of organized dissent.<sup>12</sup>

But it is important to separate Internet penetration rate with the effect of Internet penetration. Connectivity does not necessarily entail that citizens are using the Internet to access information that is forcibly restricted in the traditional media sphere. However, the new emergence and popularity of a vibrant Egyptian blog community suggests that this is the case.

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#### EGYPTIAN BLOGOSPHERE

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**“[Egyptian bloggers] have from my point of view...effectively become the vanguard of the opposition, supplanting the political parties, all of which have succumbed to the government and have in the process lost all relevance and importance.” Mohamed Khaled**

A result of the relative freedom reserved for online activity has been an explosion of blogging activity. Mehanna (2008) estimates 160,000 active blogs as of April 2008. A study conducted by the Egyptian government, and cited in Hardaker (2008), estimates that 80,000

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<sup>11</sup> Syria, Yemen, Saudi Arabia, and Iran, among others, have resorted to shutting down entire websites that they deem to be threats. (Hardaker, 2008: 6)

<sup>12</sup> See Benkler (2006: 212) and Kalathil and Boas (2003) for further discussion of the affect of internet penetration on the control of authoritarian regimes

active blogs are published from within Egypt. Of these blogs, 8,000 are read by 50,000 or more people. Bloggers publish information and opinions that are not printed in Egypt's traditional mass media. They have published coverage of topics ranging from torture to corruption to sexual harassment of Egyptian women. According to David Hardaker:

In Egypt, bloggers are at the frontline of journalism, using their ability to move around and to rapidly post information as it comes to hand. Indeed, as self-styled 'citizen journalists' they have had greater impact than their professional journalist peers. This is partly because they are free of the shackles of traditional media which will in most cases have business or political party links to the ruling regimes.

(2008: 7)

The hard-hitting subject matter of Egyptian bloggers coupled with the rising rate of Internet connectivity has resulted in the formation of a new, more trusted media for Egyptians. Citizens seeking better access to information about current events in Egypt than traditional media offers have increasingly turned to bloggers. "The Egyptian blogosphere provides more than a news resource, representing an alternative urban hub and acting as an interface between events in the streets and the Internet." (Fahmi, 2009: 106) Despite the alternative forms of information in the blogosphere, the offline dominating Muslim Brotherhood has a strong presence online in the blogosphere. (Hardaker, 2008: 10) The state has also cracked down on the blogosphere and has detained "large numbers" of bloggers and tortured some of those arrested. (Khaled, 2009; Hardaker, 2008). A newspaper editor was subpoenaed and charged with slander by the government because he failed to delete a 'bad' comment from his blog. The comment dated back two years. (Rakha, 2009)

This new arena of online journalism is not as clearly indexed<sup>13</sup> as a traditional mass media. To view a television news report, a citizen turns on a television. To read a newspaper a citizen stops on a street corner to pick one up. To access a blog, a reader must either find the site herself through searching, be referenced to it via hyperlink from another site, or be expressly directed by another person to visit the site. But once the site is found blogs are often free and accessible.

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<sup>13</sup> Indexing in this context is not to be confused with "indexing" as defined by Bennett (1990) "in which journalists and editors limit the range of political viewpoints and issues that they report on to those expressed within the mainstream political establishment." (Castells, 2007: 241)

Blogs tend to offer archived, permalined units of content that are visible to anyone, designed to link and be linked to, and tagged with metadata for maximal visibility to search engines. This participation in the link economy makes blogs an important part of an ongoing public record, indexed by search engines, cited by other bloggers, and otherwise kept alive as engrams in the social mind. The arguments, opinions, and analyses that are found in the blogosphere have been intentionally offered up to the world, an open contribution to public dialogue. (Etling, et al, 2009: 46)

High-traffic spaces online, where most users will begin their search for online information, provide users with hyperlinks to blogs, thereby indexing online information and making it accessible.

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### HIGH TRAFFIC ONLINE SPACES

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**“The cornucopia of stories out of each of us can author out own will only enhance autonomy if it does not resolve into a cacophony of meaningless noise.” – Yochai Benkler (2006)**

The online spaces with the highest concentration of Internet users in Egypt are Google, a search engine used to find information, and Facebook, a social networking site where users connect with other users to form large intertwined information environments. Whereas Google is used to actively search for specific information, Facebook presents suggestions for information to be accessed in the form of hyperlink. Facebook “friends” post hyperlinks to “share” content with other friends. In this process they direct users to sites that they found to be interesting, informative or both. In the process, the social networks on Facebook have republished online news making it easier for users to find blogs that are publishing information outside of the purvey of the traditional mass media sphere.

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### FACEBOOK STRUCTURE

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Like other social networking sites (SNS) Facebook established the user as the center of his social universe. Users connect with other users by “friending” them. After linking to another user via Facebook friendship, the activity of that other user is automatically published in a user’s “newsfeed”. The newsfeed of each user is an aggregation of the information published by all of the user’s “friends”.

Facebook also allows for the creation of groups. Groups can be closed to the general public, require an invitation to join, or can be public, only requiring the user to choose to join. Groups have a wall feature that is similar to the individual user's wall where any "friend" or in this case, group member, can post comments that can then be seen by all group members. Members can also post hyperlinks to external pages, like blogs, to direct other members to an information source that he finds particularly compelling, trustworthy, or important. Given that groups are selectively joined by Facebook users, it follows that groups are frequently comprised of those with similar interests or viewpoints. (Feezel et al, 2009: 6)

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#### APRIL 6 YOUTH MOVEMENT ON FACEBOOK

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The focus of this study is the April 6 Youth Movement Facebook group. The group, formed in 2007, has more than 73,000 members. Its stated focus is to provide a platform for discussion about Egypt and its plethora of problems. The group began with the aim of supporting a workers' strike at a factory in Mahalla, a Nile valley town, and successfully sparked a nationwide protest on 6 April, 2007. Government officials arrested more than 200 protesters, seven of whom were connected to the online organization of the protest, most of which took place on Facebook. (Shapiro, 2009)

In response, "between May 4, 2008 and April 6, 2009, the Mubarak regime employed three distinct strategies to derail the April 6<sup>th</sup> movement – economic, repressive, and technological." (Faris, 2009: 3) The government arrested the organizer of the Facebook group and released her three weeks later after she condemned her own participation in the protests. The other primary organizer fled from authorities, was apprehended, and alleged that he was tortured until he revealed the password to his Facebook account. (*Ibid*)

The use of the April 6 Youth Movement Facebook group is not limited to organizing political demonstrations. In the aftermath of devastating rockslides in September 2008, Facebook activists coordinated extensive relief efforts and fundraising drives to assist affected families. According to journalist Mona Ethalway, "Facebook activists became the thin line between rage and sheer anarchy." (2008: 71)

In April of 2010, the April 6<sup>th</sup> Youth Movement repeated calls for protest on the second anniversary of the original Mahalla protest. While in the first two years of organizing the April 6<sup>th</sup> protest, the group was not aligned with any specific entity, a new oppositional



leader, Mohamed ElBaradei helped to galvanize several movements (Dunn, 2010) under the umbrella of the April 6<sup>th</sup> protest. ElBaradei, the former director of the International Atomic Energy Agency and Nobel Laureate, has garnered momentous support, first from a Facebook group that established by a group of Egyptians seeking to encourage him to run for president in 2011. He returned to Egypt from Geneva in February of 2010 to a large group of supporters and international media awaiting his arrival at the airport.

Between his arrival in Egypt and the April 6<sup>th</sup> protest, ElBaradei has caused an increasingly loud stir in the Egyptian political sphere. ElBaradei and his National Association for Change, are working as of this writing to change the constitutional amendments that prevent independent candidates from running for the presidency. This was the focus of the April 6<sup>th</sup> 2010 protest. While the 2009 protest lacked a structured message (Faris, 2009) the 2010 protest clearly called for tangible changes. The response from the Mubarak regime was swift and forceful. I was present in downtown Cairo on the morning of April 6<sup>th</sup> 2010 and witness several hundred riot police and plainclothes officers drag away protestors and detain them in army detention trucks. Reports of journalists, international and local, being harassed, their cameras and cell phones confiscated, some even being detained, most likely explain the muted media coverage of the crackdown. After twenty minutes of activity, the protest was stopped in its tracks, and security officers maintained an intimidating presence in the downtown area for the remainder of the day. The government shut down the website of both the April 6<sup>th</sup> Youth Movement and ElBaradei, but did not shut down Facebook. The activity on the Facebook wall during and immediately after the April 6<sup>th</sup> 2010 protest is of particular interest in the present study and an analysis of it is included later in the paper.

The organizational efficiency of Facebook has not been consistent. The group has been plagued with a low commitment level, a small number of on the ground leaders and participants, and an amorphous message (Faris, 2009). But the focus of this study is not to explore the April 6 Youth Movement Facebook group's organizational capacity, but rather the function of the groups wall as a media index for an online, alternative, or counter, public sphere. The impetus for choosing this group over a more general 'blogosphere' is its size, shared web space (Facebook wall), the quantifiable connectivity of a individual embedded in a social network site, and the enclosed system.

The aggregation service of the Facebook wall is dependent upon the choices and activity of group members who select information sources to share. These individuals take on the role of opinion leaders that gather information in the vast online environment and repost this information via hyperlink for all members of a self-selecting group to view, thereby setting a media agenda for the group. This creates a stratified group in a superficially non-hierarchical group. If, as Habermas (2006) contends, “The stratification of opportunities to transform power into public influence through the channels of mediated communication...reveals a power structure,” (419) a power structure will emerge in the seemingly egalitarian Web 2.0 networks. This is in contrast<sup>14</sup> to the view of Benkler (2006) who argues that “The networked public sphere, as it is currently developing, suggests that it will have no obvious points of control or exertion of influence – either by fiat or by purchase...And it promises to offer a platform for engaged citizens to cooperate and provide observations and opinions, and to serve as a watchdog over society on a peer-production model.” (Benkler, 2006: 177) Despite his confidence in the anarchy of the networked public sphere, Benkler later outlines the pattern of popularity clustering, whereby, “at a macrolevel, the Web and the blogosphere have giant, strongly connected cores – ‘areas’ where 20-30 percent of all sites are highly and redundantly interlinked.” (2006: 247-8) This structure that Benkler describes mirrors the hierarchy of influence that Habermas’ address.

Whether the individual user can exert influence and gain power within a seemingly egalitarian network will be explored in the present study. To contextualize the unit of analysis in the present study, a definition of social network sites and previous research addressing Facebook must first be operationalized.

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<sup>14</sup> Though the two theorists seem to disagree on the potential of power structures to dominate the networked public sphere, this disagreement could be the result of a different operationalization of the term public sphere. Benkler (2006) states that he is using a rather “limited definition.” Benkler (2006) defines public sphere as “a sociologically descriptive category. It is a term for signifying how, if at all, people in a given society speak to each other in their relationship as constituents about what their condition is and what they ought or ought not to do as a political unit.” (Benkler, 2006: 178)

## CHAPTER 3: BACKGROUND MEDIA THEORY

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### SOCIAL NETWORK SITES

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Social network sites stem from the term ‘*social network*’, defined by Wellman and Berkowitz (1994) as being “composed of nodes (people, groups, organizations, or other social entities such as nation-state) connected by a set of relationships” (cited in Park, 2003: 50).

This concept of social networks was first applied to offline relationships, but with the emergence of mass communication tools, theorists expanded the analysis of social networks to include *communication networks*. Rogers and Kincaid (1981) defined communication networks: “The nodes in a communication network are the same as those in a traditional social network (generally individual peoples): the contents of the social relation (or link) are communication exchanges or information transfers.” (Paraphrased in Park, 2003: 51)

Websites that mapped existing offline social networks by allowing for the development of communication networks are called Social Network Sites (SNS). There is some debate as to whether the sites (i.e. Facebook, MySpace, Bebo) should be called social networking sites or social network sites. As explained by Boyd and Ellison (2007), the term ‘networking’ “emphasizes relationship initiation, often between strangers. While networking is possible on these sites, it is not the primary practice on many of them, nor is it what differentiates them from other forms of computer-mediated communication.” (2007: 1) The research of Boyd and Ellison and other media scholars is largely centered on the usage of SNSs by American university students and youth in other westernized countries. In the context of the American university, SNSs have been shown to enrich already active offline relationships (Ellison and Boyd 2007)<sup>15</sup> but this may not be the case in other social settings.

In the present study, a Facebook group, and not an individual user, is the central node of the social network. Because of the sheer size of the group, and the fact that it had no preceding equivalent in the offline environment, the development of relationships in the

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<sup>15</sup> This pattern has not been proven to be the case in Egypt. Although limited research addressing the functional usage of SNSs in the Arab world, or more specifically Egypt, have been conducted, anecdotally, internet users do frequently initiate relationships online that were not already established offline. Data concerning this process will be collected during the qualitative interviews conducted during this study.

group would be better termed ‘networking’, even if the site itself, Facebook, retains the name a ‘social network site’.

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## SNS AND LINK ANALYSIS

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Despite the lack of applicable research pertaining specifically to Facebook, background research analyzing link structure and social network structure is helpful. Jamali and Abolhassani (2006) define ‘social network analysis’ as:

“the mapping and measuring of relationships and flows between people, groups, organizations, animals, computers, or other information/knowledge processing entities. The nodes in the network are the people and groups, while the links show relationships or flows between the nodes.” (1)

Though the term ‘link’ can apply to a theoretical connection between two individuals, it takes on a technological meaning when used in the context of social network sites. Links on SNSs are represented by hyperlinks that connect two web pages – or profiles of two individuals. As these links take on a technical meaning they also become quantitatively measurable units. Because, as Park (2003) explains “a website functions as a node that passes messages and determines their paths according to a selection of hyperlinks,” (2003: 53) the hyperlink is an appropriate unit of analysis in the previously described social network analysis. Hyperlinkage posted by members of the April 6 Youth Movement Facebook group, then, is an important feature of assessing the structure of the group and an effective way of quantifying the sites information environment.

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## RESEARCH ON FACEBOOK

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Research focusing on social networking websites has developed significantly since 1997, when the first SNS, SixDegrees, was launched. Despite the existence of hundreds of SNSs, the most popular and globally accessed SNS is Facebook. Facebook has exponentially grown in popularity since its creation in 2004 and now has over 300 million registered users worldwide. It is available in 70 languages and is the second most accessed site in the world and the second most accessed site from inside Egypt – behind only

Google.<sup>16</sup> This popularity helps explain why much of research of peer-reviewed research concerning SNSs uses Facebook as its focus of study.

Coyle and Vaughn (2008) found that the majority of students using Facebook did so to “keep in touch with friends.” (2008: 15) The researchers also conducted a survey to determine the amount of times the average user accessed their Facebook account on an average day. Though the frequency varied from zero to 17 times per day, the mean was 3.3 and the standard deviation 3.3 showing a wide variability.

In Lampe, Ellison, and Steinfield (2006) researchers defined, analyzed and measured the frequency of ‘social searching’ versus ‘social browsing’ on Facebook. They defined ‘social searching’ as looking up information about individuals already known in a user’s offline social network to enhance the user’s knowledge of that individual. ‘Social browsing,’ in contrast, is the random searching for individuals not in a user’s offline social network. The researchers concluded that university students use Facebook overwhelmingly for ‘social searching.’

From this data, researchers speculate that users are not visiting Facebook to meet new people, but rather to enhance existing social relationships. Ellison, Steinfield, and Lampe (2007) further explored this when they studied how and why American university students used Facebook. The researchers found that students used the site to enhance offline relationships and accumulate social capital, particularly ‘bridging social capital,’ which the authors define by citing Williams (2006): “members of weak-tie networks are thought to be outward looking and to include people from a broad range of backgrounds. The social capital created by these networks generates broader identities and generalized reciprocity.” (cited in Ellison, Steinfield, and Lampe, 2007: 1152)

Though the body of research that implies that social networking sites are actually social network sites that replicate an already existing network, Subrahmanyam et al (2008) found that a direct correlation between offline and online networks does not exist. Their research which found a close but not exact overlap of students’ online and offline social networks, also focused on the experiences of American university students. The researchers concluded that social network sites must not be considered a mirror image of offline networks. (2008: 432)

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<sup>16</sup> According to Alexa web statistics at [www.alexa.com](http://www.alexa.com).

Despite the research focus on American university students, Ross et al (2009) found that there are no significant personality traits that correlate in a statistically significant way with Facebook usage. Facebook, according to this researcher, is being adopted ubiquitously without regard to individual users' personalities.

Feezel et al (2009) conducted a content analysis of Facebook groups that were formed around political beliefs. They explored the relationship between online political engagement and offline activity, the relationship between online political group membership and political knowledge, and the quality of comments on the walls of political Facebook groups. By surveying what they called 'hyper-users' and conducting content analysis of a random sample of wall comments, Feezel et al found that while there is a correlation between online participation and higher levels of offline political participation, there is not a correlation between online group membership and higher levels of political knowledge. They concluded that the low quality of wall comments and the high levels of editorializing by those who comment results in a lack of increased political knowledge.

The methodological attention that Feezel et al (2009) give to the Facebook wall is very relevant to the present study. They chose to focus on the group wall because:

"Groups usually allow for members to post comments on 'the wall' to be viewed by members and non-members alike. These comments on the group wall as seen as a proxy for discussion that might occur in face-to-face interactions in a traditional offline groups."(Feezel et al, 2009: 13)

Robertson, Vatrappu, and Medina (2009) also use the Facebook wall to analyze the patterns of Facebook users' postings on political candidate websites in the 2008 U.S. Presidential election. They found that only 5.8 percent of posters posted hyperlinks, that links were highly partisan, and that high frequency posters more often linked to sites outside of Facebook. Melhuish and Beale (2008) used the Facebook "News Feed" feature to explore the dissemination of social information, but do not discuss the implications these information flows have on non-personal or offline information.

While Feezel et al (2009) and Robertson, Vatrappu, and Medina (2009) focus on the user's political usage of Facebook, Wills and Reeves (2009) highlight the ability of the political establishment to use Facebook as a campaign tool. After outlining the motivations behind a Facebook user's willingness to make public private information, the researchers explain how a hypothetical political organization could go about using Facebook to structure

a campaign strategy for a particular party in a particular district. By culling through publicly available data and characteristics of a user's network, Wills and Reeves map a visualized network according to political affiliation and district. They conclude: "We have demonstrated how data disclosure can be understood as an interaction with an opaque machine, without knowledge of rules, logics, and thresholds that are hidden from view." (2009: 279) The researchers call for more exploration of the political implications of public availability of private information and the implications of Facebook being "set up in such a way that *encourages* information disclosure." (2009: 272)

Coenen et al (2006) explore the idea of knowledge sharing in the social networking environment. They divide knowledge sharing into two groups – passive knowledge sharing and interactive knowledge sharing.

In the passive mode, the source, who owns the knowledge, externalizes his knowledge and stores it as information. The receiver, who wishes to use the knowledge, assimilates the knowledge but has no way of formulating feed-back to the source.

Unlike what is the case for passive knowledge sharing, interactive knowledge sharing involves a possibility for the receiver to provide the source with feedback." (2006: 1)

The researchers conclude that a combination of passive and interactive knowledge sharing is ideal for it to be effective. They also conclude that social networking sites are particularly well-suited to accommodate knowledge sharing.

Coenen et al (2006) and Carlile (2002) found that members of closed groups were much more likely to communicate with each other than members of open groups. In their two studies, three times as many messages were exchanged between members of closed groups than members of open groups.

The April 6 Youth Movement Facebook Group can be freely viewed by anyone with a Facebook account. It is also open to be joined by anyone interested. According to the research of Coenen et al and Carlile, the openness of the group could result in less discussion than if the group were closed to non-members.

As becomes quickly apparent, research pertaining to Facebook has almost solely focused on its usage in a western setting. Another major drawback of the previous research is the sample size and uniformity of the respondents – most are Americans in a university setting. The narrow reach of the studies is not surprising given that Facebook has only

recently been adopted globally. But, because the present study focuses on the usage of Facebook in a socio-political setting different from those explored in existing research, few, if any, of the preceding results can be generalized to apply to the present research. However, the methodological processes applied in the preceding studies provide guidance for the methodological structure of the present study and will be further discussed.

The present study considers the use of Facebook not as a socializing tool used to accumulate social capital or enrich university friendships. The present study looks at the properties of a particular Facebook group for fostering discussion and creating a media environment that sidesteps a traditional, government-controlled mass media. Rather than a reflection of an already existing social network, the group examined here develops as an alternative space for debate. Before continuing with an explanation of media theory that will be applied in the analysis of the group, this paper will briefly operationalize the concept of a public sphere, media system dependency, a counter-public sphere, and civil society to better explain where the April 6 Youth Movement Facebook Group is situated in the political frame.

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## PUBLIC SPHERE

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The public sphere is a metaphorical space of public collusion, where individuals gather together to guide the progression of a particular society through the act of discussion and intellectual debate. It is a space where public opinion is formed about ‘matters of general interest’ (Habermas 1991). The public sphere is an important concept in the structure of a healthy democracy and is a useful term for the present study. Postill (2008), citing Holub (1995), defines a public sphere as “an arena, independent of government [and market]...which is dedicated to rational debate and which is both accessible to entry and open to inspection by the citizenry. It is here...that public opinion is formed. (Holub, in Webster, 1995: 101-2)” (Postill, 2008: 417) The sphere is therefore also comprised of civil organizations, NGOs, and oppositional movements, like the group analyzed in this paper.

As previously mentioned the arena for debate in Egypt is tightly controlled by the state and the dominating Muslim Brotherhood. As it relates to media, Habermas argues that for a fully functioning democracy to exist and sustain itself:

First, a self-regulating media system must maintain its independence vis-à-vis its environments while linking political communication in the public sphere with both



civil society and the political center; second, an inclusive civil society and must empower citizens to participate in and respond to a public discourse that, in turn, must not degenerate into a colonizing mode of communication.” (Habermas, 2006: 420)

As evidenced by the previous overview of traditional mass media in Egypt, a fully functioning public sphere does not exist offline. (Mehanna, 2008)

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### MEDIA-SYSTEM DEPENDENCY

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As a public uses media in its discussions there is an inevitable degree of media system dependency, defined in Ball-Rokeach (1985) as:

a relationship in which the capacity of individuals to attain their goals is contingent upon the information resources of the media system – those resources being the capacities to (a) create and gather, (b) process, and (c) disseminate information.” (Ball-Rokeach, 1985: 487)

Because of this media-system dependency the media sphere accessed by the citizens engaged in a public sphere is a vital variable to the content and quality of the debate – and potentially the public opinion – that arises from the open discussion. In the context of a government-controlled traditional mass media, the creation of alternative media spheres can satisfy this media-system dependency. In effect, media-dependency need not be dependency on traditional forms of mass media – it can be depending on alternative media. And public spheres need not only be a singular, central public space within a nation-state. Societies can also develop autonomous public spheres that seek to challenge dominant institutions – referred to as counter-public spheres – in response to monopolization of public debate in the political and traditional mass media realms.

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### COUNTER-PUBLIC SPHERE

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**“What does not exist in the media does not exist in the public mind, even if it could have a fragmented presence in individual minds.” (Castells, 2007: 241)**

Recognizing that public debate and the development of autonomous public spheres can result in more than just a parallel arena for discussion, Downey and Fenton (2003)

develop the term ‘counter-public sphere’<sup>17</sup>. In their conception, the ‘counter-public sphere’ is not just autonomous and independent of the dominant public sphere, but actively challenges it. (Downey and Fenton, 2003: 193)

When discussing the development of a counter-public sphere Downey and Fenton (2003) connect the usage of the Internet for knowledge sharing and organizational activities of counter-public spheres.

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## CIVIL SOCIETY

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Gellner (2006) defines civil society as “the idea of institutional and ideological pluralism, which prevents the establishment of a monopoly of power and truth, and counterbalances those central institutions which, though necessary, might otherwise acquire such monopoly.” (cited in Downey and Fenton, 2003)

For Gellner, civil society is organization that is not governmental or associated with singularly dominant institutions. Though this definition may draw comparison to the concept of a public sphere, Downey and Fenton (2003) rightly encourage that the two concepts be separated for the sake of clarity. They describe the current view of a civil society: “a mediating space between the private and public spheres in a pluralist democracy. A place where individuals and groups are free to form organizations that function independently and that can mediate between citizens and the state – the place where autonomous public spheres reside.” (2003: 190) But Downey and Fenton rightly call for a distinction between civil society and the public sphere because, as they argue, “separating civil society from the public sphere allows us to identify those types of social organization within a counter-public sphere that may work against democratic gain – they may be autonomous but anti-democratic in process and purpose.” (2003:191)

As discussed in the background research on Egypt, civil society is largely dominated by the government or the Muslim Brotherhood. Though ideally, as Downey and Fenton argue, civil society should be the locale in which public spheres reside, this growth has been

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<sup>17</sup> The authors cite Negt and Kluge’s (1972) concept of ‘anti-publicness’ as inspiration for the term ‘counter-public sphere’. (Downey and Fenton, 2003: 193)

limited. Given that public spheres are prevented from forming in Egyptian civil society it is possible for them to grow within the media sphere.<sup>18</sup>

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### ONLINE PUBLIC SPHERE VERSUS ONLINE PUBLIC SPACE

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With the increased penetration rate, theorists have posited the development of an online public sphere. Given the capacity of networked technology to mimic the discursive spheres of offline reality, the development of networked online communities has inevitably drawn comparisons to the traditional public sphere. The major elements of a public sphere – that it involve interactive debate, represent a cross-section of society, and not be co-opted by a dominant institution – are largely met in the online environment.

But, Papacharissi (2002) makes an important distinction between a new virtual public space and a virtual public sphere:

It should be clarified that a new public space is not synonymous with a new public sphere. As public space, the internet provides yet another forum for political deliberation. As public sphere, the internet could facilitate discussion that promotes democratic exchange of ideas and opinions. A virtual space enhances discussion; a virtual sphere enhances democracy.” (2002: 11)

The distinction between a public sphere, a counter public sphere, civil society, and an online public sphere is important to contextualize the April 6 Youth Movement Facebook group.<sup>19</sup> Given that the political and traditional mass media spheres are sealed off from public participation and open debate, a new, online media *sphere* developed that provided information to a new online *space* of debate. (Mehanna, 2008) The term space is used for several reasons: the population of the Facebook group is too small, self-selecting, and exclusive (in that it requires access to technology out of reach for most Egyptians). Because the group does not fulfill the conceptual elements of an online public sphere, it does still qualify as an immensely valuable public space for discussion.

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<sup>18</sup> John Hartley has argued that media is the public sphere.

<sup>19</sup> Another potentially meaningful theoretical framework that is not addressed here is field theory. Pierre Bordieu’s conception of the journalistic field (Benson, 2005) could be used to analyze the relative autonomy of the new media sphere online and the traditional media sphere offline in Egypt. An analysis of this type is outside the reach of this paper but could yield interesting results.

This *space* is autonomous in the sense that it can be independent from the traditional offline media and political spheres. It still, however, relies on traditional frameworks of power, includes discussion of oppositional party activity, and cites information in the traditional mass media.

Most important for the present study is to establish that the online environment, while perhaps not an autonomous public sphere, is an autonomous media sphere. The Egyptian blogosphere, as described earlier, engages in self-referencing, exists independently from the traditional mass media, covers an array of information more diverse than the traditional media, and has a readership that rivals in size traditional, government-backed publications. The purpose of this study is to assess the degree to which members, specifically the most active members, in the April 6 Youth Movement Facebook group use information from the online media sphere to discuss offline public affairs in an online virtual space – Facebook.

To bring information from the online media sphere to the Facebook discursive sphere, users use hyperlinkage. To discuss the function of *hyperlinkage* by active users in the process of *knowledge sharing* in a *virtual online public space* the operationalization of several theoretical media models—agenda setting, two-step flow of communication, gatekeeping, gatewatching – is necessary.

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## TWO-STEP FLOW MODEL OF COMMUNICATION

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The two-step flow model of communication is a helpful theoretical model to better understand the role of highly engaged individuals – in the present study, the most active members of the Facebook group – in the formation of public opinion. Researchers in the 1940s sought to explain the flow of information from the mass media to the audience. In *The People's Choice: How the Voter Makes up His Mind in a Presidential Campaign* (1944), Lazarsfeld, Berelson, and Gaudet tried to uncover the flow of information, positing that individuals based their opinions on more than just the direct receipt of information from mass media sources. To explain the transfer of information from mass media to the masses, they hypothesized a 'two-step flow model of communication'. The first step was the broadcast by the mass media (which at the time of his writing mainly consisted of television, newspapers, and radio). The most active information receivers in society, a group called opinion leaders, would consume mass media information. Opinion leaders would then share the information and accompanying opinions with those around them. In this way,

information would reach the masses, not directly but through the conduit of a smaller subset of society who held sway over others.

Researchers have used the concept of opinion leaders to track the diffusion of information about innovation and marketing. (Valente and Davis, 1999; Feick and Price, 1987) Nisbet and Kothcer (2009) used the two-step model of communication to explain online information diffusion about climate change.

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## AGENDA-SETTING

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While opinion leader research focused on the public's digestion of information presented by the mass media, agenda-setting research explores the actions of media institutions. Media theorists, beginning with McCombs and Shaw (1972), argued that, by making discretionary decisions and choosing to cover certain events while ignoring others, media institutions exert influence on the issues that are addressed in the public sphere. Theorists have argued that they set the agenda, hence the term 'agenda-setting'.

In 1972, the theory of agenda-setting was set forth in the paper "The agenda setting function of the mass media" in which McCombs and Shaw attempted to explain the development of public debate agendas by exploring the decisions of dominant media institutions. The agenda setting theory posits that the mass media has the power to set an agenda by making decisions about what issues are newsworthy. By focusing on one story over another they encourage the public they serve to give weight according to coverage. This affects an issues salience in the public sphere which can thereby influence the discussion taking place by defining what is discussed. The theory is encapsulated by Bernard Cohen's assessment, "The press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about" (Cohen, 1965: 13)

The agenda setting theory has been further developed since McCombs and Shaw to accommodate more advanced methodological processes such as cross-lagged longitudinal studies that account for a more detailed exploration of agenda setting effects on public discussion and debate.<sup>20</sup>

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<sup>20</sup> Takeshita (2005) documents this refinement of methodological approaches in agenda setting research.

Research into agenda setting effects online has largely been limited to traditional offline newspapers' online presence (Althaus and Tewksbury, 2002), the effect of traditional media reportage on online discussion (Roberts et al 2002; Wallsten, 2007) and the agenda setting relationship between the emerging Blogosphere and traditional media both online and off. (Marlow, 2004; Drezner and Farrell, 2004)

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#### FUSION OF AGENDA-SETTING AND TWO-STEP FLOW MODELS

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As researchers studied the role for the media in setting the agenda of the public sphere, a model of institutional control proved too simplistic. Researchers then began to examine the role of interpersonal communication in the agenda setting process. Hong and Shemer (1976) argued that interpersonal communication was an intervening variable in the agenda-setting process and concluded that, depending on circumstance, can serve to curtail or enhance the agenda-setting effects of mass media. Roberts, Wanta, and Dwzoo (2002) explored the impact of interpersonal communication on issue salience, comparing media sources with personal sources. They discovered that interpersonal communication can enhance agenda-setting effects when the topic of discussion pertained to, or referenced, media. Weimann and Brosius (1994) propose a two-step flow of agenda-setting:

In a first step, the influentials identify emerging issues in the mass media agenda and change their personal agenda accordingly. In a second step, they will diffuse their personal agendas to others with lower influencability via their personal communication ties. Testing this 'two-step' model requires that a) the influentials identify the emerging issues faster than others, and b) that the non-influentials' agenda originates more from the influentials than from the media. (1994: 327)

To analyze influence, Weimann and Brosius relied upon the Strength of Personality scale (SP) developed by Noelle-Newman in 1983.<sup>21</sup> This scale uses a 10-item questionnaire to identify "individuals who are more involved in interpersonal communication, and those who serve as a source of advice and guidance for others." (1994: 337). Using this scale to

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<sup>21</sup> Unfortunately Ross et al (2008) who studied the personality traits that correlate with having a Facebook account did not include in their survey the types of activity initiated on Facebook. If they had, an analysis of the correlation between SP and political activity could have provided interesting results.

determine the influence of an individual, researchers explored the media consumption habits of the most influential and found that they read more newspapers, magazines.<sup>22</sup>

In their conclusion, Weimann and Brosius suggest a two-step flow model of the agenda-setting process, “with the influentials serving as personal ‘bridges’ between media agendas and personal agendas.” (1994: 337)

Yang and Stone (2003) sought to separate a group of respondents into two groups: one of individuals who rely heavily on mass media for information collection and the other who relies on interpersonal communication. Once respondents were separated into these two groups, the researchers assessed each of the groups’ media agenda, and compared the two in contrast to each other and each in contrast to the mass media agenda. “This study’s purpose was to test agenda-setting influences against those of two-step flow based on people’s interpersonal versus media reliance.” (2003: 65) They found that people rely about 80% of the time on mass media for information about news and public affairs and the remaining 20% of the time on interpersonal communication.

Rejecting the original hypothesis, that those who relied directly on mass media would more closely match the mass media agenda, the researchers concluded that those who relied on interpersonal communication for news and public affairs had a media agenda that matched the mass media agenda at the same or a higher rate than those who relied directly on the mass media. From these results, Yang and Stone conclude that the two-step flow of communication is an important part of the agenda-setting process. Those who are more reliant on mass media than interpersonal communication than on the mass media for information are, according to preceding two-step flow research more likely to attend closely to news and public affairs. For this reason they are less likely to directly accept the mass media agenda than those who rely on others to provide information.

Yang and Stone call for a unification of the two-step flow model and agenda-setting theory to explain the diffusion of media agendas through the public.

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## GATEKEEPING

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<sup>22</sup> In studies conducted in Germany, the United States, and Israel.

Though once a stand-alone theory, gatekeeping has largely been subsumed under the heading of agenda-setting. For the purposes of the present study, it is necessary to differentiate between the two. Where agenda-setting is the process of institutionalized media structuring a public's media sphere, gatekeeping is the act of an individual in making decisions that compose the system of agenda-setting. Bruns (2005) explains the process succinctly: "At its most basic, gatekeeping simply refers to a regime of control over what content is allowed to emerge from the production processes in print and broadcast media; the controllers (journalists, editors, owners) of these media, in other words, control the gates through which content is released to their audiences." (2005: 11)

Dimitrova (2003) examines the role of hyperlinking as a function of traditional gatekeeping as traditional media institutions develop an online presence. She concludes: "by choosing certain hyperlinks and ignoring others, online newspapers are more often than not keeping the gate to the vast information available on the Internet closed." (2003: 412)

With the development of SNSs and more interactive knowledge sharing processes, hyperlinking is more frequently done by individuals outside of the traditional media sphere. As individuals increasingly, actively share media sources and publish hyperlinks, a new paradigm of gatekeeping develops: because it is the active individual and not the dominant institution choosing what to (re)publish the conventional concept of agenda-setting no longer applies.

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#### AGENDA-SETTING, OPINION LEADERS ONLINE

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With the introduction of the internet and the increasing use of online sources for information, media theories have been tested and re-contextualized. The role of interpersonal communication in agenda-setting modeling has change as interpersonal communication has changed. Cathcart and Gumpert (1988) established the term 'mediated interpersonal communication' defining it as "any person-to-person interaction where a medium has been interposed to transcend the limitations of time and space." (Cathcart and Gumpert, cited in Carr et al, 2008) As the online media environment has developed so has research seeking to address the applicability of traditional mass media theoretical models. The focus of the majority of this type of research is the blogosphere.

In the blogosphere, the network of bloggers takes on the shape of an informal social network where hyperlinks are used to create a proxy social structure (Marlow, 2004) and the



discursive structure lies “between traditional print and broadcast media and small group discussion.” (Woodly, 2008: 115) And while Kuok (2009) argues that “blogs as web-based application built on user-generated content bypasses conventional gatekeepers, such as editors, advertisers, and official authorities,” (Kuok, 2009: 320) he does not address the development of new forms of gatekeeping and agenda-setting in the new paradigms of online media. According to Marlow:

“Every informal social system has its own order constituted by the attribution of friendship, trust, and admiration between members. These various forms of social association give rise to higher-level organization, wherein individuals take on informal roles, such as opinion leadership [or] gatekeeper...” (Marlow, 2004: 1)

Though the main form of publication on the Internet is the web page, it is the hyperlink that propagates a story. And contrary to traditional forms of media, an online information source can quickly be republished: by simply copying and pasting a hyperlink, an Internet user essentially republishes information. Shirky (2009) explains:

...even the seemingly minor difficulties of clipping and mailing a newspaper article were significant enough to greatly limit the frequency of that kind of forwarding. The cumulative effects of those difficulties were even stronger – to clip an article and share it with a group, you would have to copy it first, adding a step and thus reducing the attractiveness of sending it in the first place. Similarly, the recipient of a mailed clipping can’t both forward it and keep it without incurring all the difficulties of the original sender. As a result of these difficulties, the readership for any given newspaper story was a subset of the readership for the paper generally. By 2002 those difficulties had vanished...The act of forwarding a story to friends and colleagues had gone from tedious to all but effortless. (Shirky, 2009: 148)

For this reason the theoretical framework of gatekeeping and agenda-setting that is applied to the study of the traditional media with predictable institutions of power – news corporations with wide reaching publication or broadcast – has been reassessed to chart the differentiation of power among bloggers in the blogosphere. (Marlow, 2004; Hess, unpublished; Carr et al 2008)

This research signals a shift away from identifying institutions and individuals of clearly defined power as those with the influence to affect the media agenda and toward a paradigm in which the engaged, hyperlinking individual has an agenda-setting effect.

The most popular bloggers have developed an influence as they become opinion leaders for public discourse because they have developed *authority*. (Marlow, 2004; Meraz 2009) Shirky (2009) argues that no such authority exists but rather only the function of popularity can determine the relative power of online sites. He argues: “In the weblog world there are no authorities, only masses, and yet the accumulated weight of attention continues to create the kind of imbalances we associate with traditional media.” (Shirky, 2009: 94) The term authority may imply organized bequeathing of power and, because by definition, the blogosphere is insufficiently organized to intentionally hierarchize bloggers based on quality, Shirky’s clarification stands. Where the word authority is used in this study it implies strength of an individual’s standing within a social network, strength that is not necessarily earned or officially bestowed.

The conception of an individual as a holder of the power to publish, and by extension take on the role of gatekeeper, is in this study is applied to individuals who publish hyperlinks on the Facebook group wall. The degree to which a story or web page is hyperlinked largely determines its popularity. Whether or not a story is hyperlinked depends upon individuals manually posting a link on other web pages. Theoretically, in the online environment, where issue salience is less clearly controlled because a much larger array of stories are covered, the concept of an opinion leader who frequently publishes hyperlinks to articulate his opinions can be merged with that of the gatekeeper. Highly active opinion leaders can set the agenda of online discussion forums by molding the media environment of the group with hyperlinkage. And it is these active members that, over time, develop authority, even in a superficially non-hierarchical structure like a Facebook group.

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## GATEWATCHING

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In a critical approach to the adapting the agenda-setting theory to online environments, Toshio Takeshita concludes:

“It is uncertain whether agenda-setting theory is becoming obsolete or not. At any rate, in order to explore the media agenda-setting in the new media environment, one suggested strategy would be to (1) investigate web access patterns of news seekers on the Internet and identify ‘hub’ news sites.” (2005: 290-291)

Information is available to those who seek it out, and an information source online can only survive if it is located and accessed by users. Part of the process of finding readers – or

helping them to find you – is being hyperlinked to in as many places on the web as possible. Individuals who are actively engaged online perform the role of pasting links to external news sites. This idea of an individual internet user taking on this role of publisher has been introduced and discussed by Axel Bruns (2005). Bruns coined the term “gatewatching” to explain the phenomenon of an individual acting as a publisher.

“The new online ‘gatekeepers’...might call themselves ‘editors’, ‘moderators’, or ‘information guides’, but to some extent they perform traditional gatekeeper duties of selecting the material supposedly of greatest interest to their specific audience.” (Bruns, 2005: 14) Bruns continues: gatewatchers “observe what material is available and interesting, and identify useful new information with a view to channeling this material into structured and up-to-date news reports which may include guides to relevant content and excerpts from the selected material.” (2005: 18) “They observe the publication of news and information in other sources (that is, the passing of information through other gates) and publicize its existence through other sites.” (2005: 31)

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#### RESEARCH QUESTIONS AND HYPOTHESES

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Anyone who posts a hyperlink on a social networking site has taken on the role of a Brunsian gatewatcher. But, when the concept of gatewatching is combined with the classification of individuals in the two-step flow of communication, a new paradigm develops. The “opinion leaders” of an online group who act as gatewatchers exert much greater influence over the media environment of a social networking site – in this study, a group’s Facebook wall – which results in them setting the agenda. The aim of this study is to assess the degree to which opinion leaders in the April 6 Youth Movement dominate the media agenda of the group and which sources of information they use. An assessment of the *effects* and the level of *impact* are not analyzed here.

The preceding theoretical frameworks converge in this study of the April 6th Youth Movement Facebook group. Though there are many interesting questions to be asked about the organizational capability, political effects, and democratic implications of a group that carves out a space to discuss dangerous ideas, this study maintains the lens of media science.

As a virtual public space and a component of the Egyptian online media sphere, the Facebook group can be analyzed in the context of the preceding theoretical frameworks.

This leads to the first two hypotheses of this study:

**H<sub>1</sub>: A small group of active members contribute at exponentially higher levels than other members of the April 6 Youth Movement Facebook group.**

This hypothesis is in line with a large amount of social networking research, both online and offline. Shirky (2005, 2008) studied the distribution of popularity – in terms of readers – of blogs, and he found a power-law distribution. Shirky (2005) explains: “a power law describes data in which the  $n^{\text{th}}$  position has  $1/n^{\text{th}}$  of the first position’s rank. In a pure power law distribution, the gap between the first and second position is larger than the gap between second and third, and so on.” (2005: 125) This pattern of intensive contribution of a small few in a large group is commonly observed in social systems and should be witnessed in the April 6<sup>th</sup> Youth Movement Facebook group.

**H<sub>2</sub>: The small group of members hypothesized in H<sub>1</sub> set the media agenda for the Facebook group by contributing wall posts that hyperlink to online media at a significantly higher volume than the rest of the group.**

If the small group is setting an agenda, there will be consistency in the types of hyperlinks the most active members post. This leads to the third hypothesis.

**H<sub>3</sub>: The types of hyperlinks a user posts will be correlative to how active the user is.**

Given that the members of the Facebook group are self-selecting they are expressing a common ideological viewpoint in their membership. The stated ideological viewpoint of the group is anti-authoritarian and potentially, by extension, anti-traditional domestic mass media. The fact that the group has organized in an online public space makes hyperlinkage the easiest method to share information.

Traditional Egyptian mass media does have an online presence, but it is relatively unpopular. According to web page popularity statistics sources<sup>23</sup> of online news online that stem from offline sources are relatively unpopular. Al-Youm is the top rated offline source online (ranked 27<sup>th</sup> in Egypt) followed by Al-Ahram at 41<sup>st</sup>. Offline sources of information are largely eclipsed online by Web 2.0 sites. The top four most popular websites in Egypt are Google, Facebook, Yahoo, and YouTube, in that order. In a study of the Arabic blogosphere, Etling et al (2009) found that the Arabic blogosphere linked primarily to Web 2.0 sites. The popularity of information produced only for the online environment leads to the next hypothesis.

**H<sub>4</sub>: The majority of media posted on the Facebook group wall is produced outside of the traditional offline mass media.**

This hypothesis does not predict that all of the hyperlinks posted to the group's Facebook wall will be political in nature. It is not expected that the social nature of Facebook that researchers have discussed in a Western setting are completely replaced by political discussion in the Egyptian sphere. The current study will categorize hyperlinks into seven groups to better assess the proportion of hyperlinks that contain information dealing with issues in a journalistic way (this will be operationalized in the methodology chapter). It is expected that many hyperlinks posted on the group's Facebook wall will be to other social media pages and many will be linked to sources of information that are trivial and not politically relevant. This assumption leads to the fifth hypothesis.

**H<sub>5</sub> Hyperlink data collected during three politically high profile days (the return of ElBaradei to Egypt, the day of the April 6th 2010 protest, and April 7th 2010) will be more substantial in both volume and formatting than data collected during the other days of the study.**

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<sup>23</sup> Alexa web statistics web crawls and compiles country popularity statistics of websites. The URL for the top 100 sites in Egypt: <http://www.alexa.com/topsites/countries/EG>

## CHAPTER 4: METHODOLOGY

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### DATA COLLECTION

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The present study seeks to address the hypotheses presented in the preceding by using two phases of data collection and the categorization of the data collected. The first phase of data collection takes place over a five month time-period during which there are few anticipated political events within the traditional political sphere of Egypt. The second phase of data collection takes place over the course of three days of a heightened level of offline political activity. The first set of data collection will be analyzed as a separate data set and then will be compared to the second set of data collected during the second data collection phase. Before addressing the mechanisms of the data collection and its analysis, potential ethical issues will be outlined and considered.

### ETHICAL ISSUES

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Before beginning the data collection a series of ethical questions were raised and addressed by the researcher. The primary ethical issue is the potential invasion of privacy in monitoring a group's activities. Eysenbah and Till (2001) outline ethical issues in monitoring and researching online discussion forums. They argue that the most important three ethical issues for monitoring these groups is informed consent, privacy, and confidentiality.

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### INFORMED CONSENT

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Receiving permission from group users to monitor activity and collect data is necessary when the group is private and several other conditions also apply. (British Sociological Association 2002) To determine if a group is public or private, there are three main tests: the perceived privacy of the users and the degree to which users are "seeking public visibility." Eysenbah and Till (2001) argue for the use of three main factors to determine the perceived level of privacy of group members: the barrier of entry to group membership, the number of members, and the members' perception of the group's aims. Because the barrier of entry is slight, the size of the group is very large, and the group's aims are to initiate change in the

offline environment, the April 6<sup>th</sup> Youth Movement Facebook group was considered a public group.

The only requirement of visiting the group's page and content is having an active Facebook account. Because of the public nature of the group, there is no expectation of privacy for individuals. For this reason, active and informed consent for group members was not obtained, nor does this researcher think that such consent is ethically mandated.

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## PRIVACY AND CONFIDENTIALITY

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Privacy for the activity in the Facebook group is important for several reasons. Exposure of group activity has the potential to effect group members' safety. Negative impact on the group members' safety could arise as a result of circulating a report about the members and their activity. Though the data collected contains usernames of the individual group members and though usernames on Facebook are often the same as the offline names of individuals, those names will not be included in this paper. They will be used by the researcher to analyze data to ensure that hyperlinks are not attributed to the wrong individuals, but they will be replaced, where necessary, by numerical representation when recorded in the data analysis portion of this paper. Any data markers that make clear the individual mentioned will be excluded to protect the identity of the user and thereby protect their safety and their privacy.

Because the present study does not involve content analysis, group members will not be quoted. For this reason there is no need to ethically address quote attribution for members of the group.

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## FACEBOOK PLATFORM

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Another ethical issue is the Terms of Service (TOS) for Facebook usage. According Facebook's TOS, it is not permitted to automatically collect information from the Facebook website. To respect the organization's user policy and still collect a reliable sample, data from the Facebook wall will be manually copied and pasted, sorted into categories, and described using the quantitative data points outlined above. Data management will be controlled using Excel.

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## STUDYING SOCIAL NETWORKS

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Alexandra S. Dunn – Master's Thesis IMK

*<Linked In> Locked Out*

There is an irony in the evolution of the study of social networks as the network itself has moved from singularly offline to both online and off. Before the manifestation of online network connections, connections could not be analyzed in quantitative ways without extensive resources, planning an impossibly large interview series often ending in a snowball effect that needed to be arbitrarily ended before the researcher collected more data than he or she could handle. (Katz, 1957) In addition to the sheer size of potential networks, a person's connection to another within a network needed to be operationalized in the context of an extremely complex social system. While the issue with sample size has been slightly ameliorated by the Internet, the categorization of the individual connections remains a problem.

Though verifications of social connections through SNS platforms provide a tangible map of social networks, the connection itself, or the degree to which the online connection mirrors the offline connection has become more complex. This has led to research regarding what is a "friend" on Facebook. What does "friending" someone imply? How do large online social networks correlate with offline social capital? (Ellison et al, 2007)

Online relationships and online network connections can be ambiguous in terms of qualifying or categorizing the degree of the connection in social networking research. However, the tangible, measurable online networks have made it possible to quantitatively identify opinion leaders, assess their online reach, and find out more about how they use social networking as a part of their political activism by analyzing the information that they distribute to their online contacts.

The methodology of the present study seeks to use quantitative data available in a selected sample to identify opinion leaders in a contained online group with the aim of better understanding how they use online networking to distribute information in the online media sphere.

The first step of this methodological process is selecting a group to map and analyze. The April 6<sup>th</sup> Youth Movement Facebook group was selected because of its member volume (75,000 in January of 2010) and the impetus for its creation (political protest organization). By selecting a single group it is possible to conduct a contained analysis of individuals interlinked via an online network.

This approach bypasses the perennial social network analysis problem whereby the sample size grows with every new piece of data. According to Wellman:



Whole network studies are not always methodologically feasible or analytically appropriate. Those who use them find that they must define the boundaries of the population, collect a list of all the direct ties (of the sort the analyst is interested in) between the members of this population, and employ a variety of statistical and mathematical techniques to tease out some underlying structural properties of the social systems. Yet, with the current limitations of computer hardware and software, analysts have been able to study only a few types of relationships in populations no larger than several hundred. (Wellman, 1988: 26)

Note that this passage was published in 1984. Since Wellman's writing there have been considerable advancements in computer technology that make it possible to study larger sets of data in considerably less time and with fewer resources. However, with this growth in technological capacity, there has been a growth in the volume of observable connections. Individual social networks have increased in size as longer distance relationships can be maintained using mediatized communication. To partially solve the problem Wellman aptly outlines, this study focuses on a single group with a relatively static number of members.

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## DATA COLLECTION TECHNIQUES

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After selecting a group, the methodology of data collection was established to analyze the source individuals use to communicate and spread information. There are several approaches that could be used for this type of analysis. The traditional research methodology used to study social networking groups has typically relied upon qualitative interviews to assess the volume of network connections and the motivations behind those connections. Researchers using qualitative method rely upon the response of individuals to surveys, questionnaires, and interview questions.

Online network analyses that use quantitative data sets have traditionally been used to conduct large-scale studies intended to analyze the structure of the internet in its entirety or of a very large subset of the blogosphere (Halavais and Lin, 2004; Park 2002; Etling et al, 2009) in its entirety. This study seeks to use hyperlink analysis to analyze the information flow of a contained group within the larger context of the internet. Rather than use traditional small sample qualitative data sets, the present study uses hyperlink structure, typically reserved for studies larger in scope, to explore a small group. This approach allows

for quantitative exploration of a communication structure that has, in the past, been approached almost exclusively by qualitative methodology.

The first step is to establish a unit of analysis. The unit of analysis is the hyperlink, specifically hyperlinks that users post to the Facebook wall. The wall is used as the central node of the hyperlink analysis and is the primary site of data collection. The reason for the selection of the Facebook wall is that all members can see the information posted on it, all members can contribute to it, and the most often form of posting on the wall is the hyperlink. This makes the Facebook wall the expressive center of a contained group, therefore making it an appropriate central source of data for exploring the information environment of the group. From this central node, a larger, more complete picture of the group's activity can be constructed than could be created using more peripheral information sources (i.e. an individual user's profile, or a qualitative interview of an individual user).

The wall becomes particularly important in large groups. Administrators of Facebook groups with more than 5,000 members are not able to send messages directly to members to prevent Facebook servers from overloading. When a group reaches 5,000 members, the Facebook wall becomes the primary expressive format for all members, including administrators.

A useful tool for social scientists, especially those engaged in media science research, is content analysis. The present study however, does not employ content analysis because of the researcher is not familiar enough with Arabic, which is one of the two main languages used by members of the Facebook group. Selecting and analyzing only the English portions of text could lead to an improper sampling subset. To avoid this problem without losing an overall picture of the group's activity, recorded activity and hyperlinks are the focus and not the discursive content on the web pages that are hyperlinked. Further issues with the language barrier will be addressed in the methodology portion and the choices made because of the language barrier will also be explained in further detail.

To collect a comprehensive sample of wall posts, a two-week constructed sample was used. Each sample day, the entire wall including, posts, hyperlinks, photos, comments, discussions, and "likes" were transferred to an Excel spreadsheet where they were sorted by user and type of post. This process serves several purposes: first, it identifies the degree to which each member participates. Secondly, it allows for a collection of all hyperlinks used

so that they can later be analyzed by source. Thirdly, it allows for a tangible measurement of the extent of activity in the group.

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## CONSTRUCTED SAMPLING

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### GENERALIZABILITY

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An assumption of the present study is that a sequential constructed sampling of two weeks of activity will provide an accurate representation of the group's overall activity. The constructed sample is most commonly used in content analyses of media to allow researchers the opportunity to closely examine a small but representative data set thereby allowing the data set to stand in the place of an exhaustive analysis of all material available. (Riffe,1993). The present study uses this methodological tool to collect a representative sample of activity on a social networking site.

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### COLLECTION

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The two-week constructed sample is collected by recording data one day a week over a five month time period. This insures that participation is measured using cross cutting figures and does not rely on a small window of time when an individual could have surged in his or her amount of activity. This prevents spikes of activity that were not sustained from being diluted by a more representative sample. The potential affect of the difference of week day participation was controlled for by doing a true constructed sample whereby the sample includes two Mondays, two Tuesdays, two Wednesdays, etc.

The unit of analysis is any type of contribution to the Facebook group. To analyze the data from the Facebook Wall, all of the activity on the Wall was collected one day of each week between October 30 2009 and February 10 2010. The data was copied and pasted into Excel and then sorted by member, type of post, and the URL of any hyperlink posted. The number of times each individual member posted was tabulated for each day separately; a total number of posts over the entire 14-day sample was also tabulated.

The same method was applied to three single days that were highly politicized. The first was February 19<sup>th</sup> 2010, the day that Mohamed ElBaradei returned to Egypt from Europe. This day was selected because of ElBaradei's internet activism and his potential run for president in 2011. The second and third days were April 6<sup>th</sup> 2010 and April 7<sup>th</sup> 2010.

These days were chosen because of their political relevance in the Egyptian political sphere and their relation to the April 6<sup>th</sup> Facebook Group. The 6<sup>th</sup> was chosen because it was the day of the organized protest and the 7<sup>th</sup> was chosen because it would most likely contain information regarding the aftermath, media reports published about the April 6<sup>th</sup> protest, and information about arrests of Facebook activists, if any were detained because of their protest activity.

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#### TOP HYPERLINKERS AS OPINION LEADERS

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By identifying particular members and the degree to which they participate, enables an assessment of the opinion leaders in the group. The opinion leaders can then be contacted with a questionnaire in the qualitative portion of the study.

The collection of hyperlinks allows for a comprehensive look at the sources used most often to determine both the source diversity of the group and the extent to which those sources are alternative media or traditional sources of media.

The tangible measurement of activity is important to ensure that the large number of members leads to a large amount of activity. Though this correlation could be assumed, there is a question of the passivity of online social networking groups. This passivity can lead to a large group with members that are largely disconnected from the group's activity, or, in other words, a large but inactive group.

This three-prong analysis will then be studied separately.

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#### OPINION LEADERS

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The two-week constructed sample of the Facebook group should provide a clear picture of the distribution of the activity in the group. If the group follows the power-law distribution described by Shirky, a small number of highly active members should clearly emerge from the group.

Because some types of participation are more active than others the data collected will be weighted to ensure that hyperlinking to other sites and igniting discussion counts more toward an individual's degree of participation. When the Facebook wall is copied, the types of contributions are divided into seven groups listed from those weighted the least to

those weighted the most. The terms in quotes are terms given by the Facebook site and will be defined.

## DEFINITIONS OF FACEBOOK ACTIVITY

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### *1. Wall*

The Facebook group wall is the center of activity and is, in a sense, the public face of the group's discursive sphere. This is where users interact with the group and the other group members. It is the central online space studied in this paper because it is the central node of activity of the Facebook group. Any member can post information to the group's wall, making it the main forum for discussion between group members.

### *2. Wall Post*

A Facebook Wall is essentially the web homepage for a Facebook group. It is created by the activity of the users, and chronologically displays posts with the most recent first. Posts on the wall are generated by users, and when a user "posts" something, his or her name is automatically posted as well. This makes connecting the user with the post a clear process.

### *3. Like*

If when a user reads a post, he or she would like to draw attention to it or show approval of it, he or she selects the "like" button. Because this type of response does not add more information to the page, but merely draws attention to an already existing post, it is weighted significantly less than the post itself.

### *4. Comment*

A comment is structured the same way as a post, but it is a response to a post. Because it is a reaction to an already existing wall post, it is weighted as a more passive contribution than a wall post.

### *5. Hyperlink*

In comments and posts it is possible to include a hyperlink to another Facebook page or a website outside of Facebook. Because including a hyperlink with the text of a post directs

users to more information than plain text alone, comments and posts that include a hyperlink are considered more active contributions than plain text posts.

## *6. Discussion*

Facebook provides users with the discussion feature. A user can ask a question to the group or post a comment and open it for discussion. Starting a discussion is weighted more than a post, a comment, or a “like”. Responding to a discussion is weighted the same as commenting on a wall post.

## *7. Newsfeed*

Another important feature of Facebook is the “newsfeed”. When a user contributes to a group in any of the preceding ways, the newsfeed of anyone who is a Facebook “friend” with that user will be notified via the newsfeed. This feature has important implications. A user’s action is essentially published on the newsfeed of each of his or her friends. If a user has a large network of friends on Facebook, any activity by that user is visible to a larger number of people and there is a higher chance that the information will be read and possibly redistributed outside of the user’s immediate network.

## *Viral Discussion*

After a user posts an item or comment on the Facebook group’s wall, other users are free to respond. Occasionally, a user’s wall post will stir considerable amounts of activity. When ten or more users comment on a wall post within 24 hours after it is posted, the user who posted the initial comment is attributed with a significant contribution to the wall.

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## WEIGHT OF WALL CONTRIBUTIONS

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Because different kinds of activity on the Facebook wall connote different levels of activity, each action will be scored different. These scores will be given to each individual activity to establish a “weighted” value of each user’s contributions. This weighted activity will be compared to the “unweighted” activity scores which will assign a score of one to any action taken by a user on the Facebook wall. Below is a list of actions in order of weight, from the least active to the most active. The number following the type of activity is the score assigned to the activity in the weighted measurements.

1. A “like” of a wall post (1)
2. “Comment” on an already existing “wall post” (2)
3. Responding to a “discussion” (2)
4. “Comment” on an already existing “wall post” with a hyperlink (3)
5. “Wall post” (4)
6. “Wall post” with a hyperlink (5)
7. Starting a “discussion” (6)
8. Starting a viral discussion (defined by a minimum of 10 comments within the first 24 hours) (7)

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### SCORING FOR WEIGHT

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The rationale for establishing a scoring system is that an individual’s contribution to the Facebook wall is not based solely on simply acting, Actions need to be qualified. The scores assigned here are reflective of the researcher's view of the level of activity that each type of action contributes to the Facebook wall. The “unweighted” scores will be compared with the weighted scores to assess the degree to which the two measurements coincide. These parallel recordings will ensure that an extremely active individual who engages consistently with the Facebook wall will not be left out of the elite group of users. It also ensures that users engaging in more forceful forms of communication will be included in the elite group. The two data sets will be compared in the data analysis and the process of establishing the list of users in the elite group will be more fully explained.

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### HYPERLINK ANALYSIS AND QUALITATIVE CATEGORIZATION

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To better understand the patterns of information posted by users on the Facebook wall, the hyperlinks posted during the two-week constructed sample will be collected and sorted by category. The goal of this topical categorization of hyperlinks is to determine the type of source the hyperlink links to. Source in this sense is general in that it is meant to distinguish between types of media and specific in that it also aims to assess the producer of the content where possible. Three main tactics will be used to sort the hyperlinks and the tactic used is dependent on the type of link. Hyperlinks will be divided into six primary categories and then described using a subset of factors suitable for each of the six types of links.

1. Other Social Network Groups (other Facebook groups or online groups)

2. Individual Posted Multimedia (videos, photos, and audio)
3. Information Formatted as Journalism (newspaper articles, blog posts, video produced for news sites, and audio)
4. Political Candidates
5. Advertisements
6. Religious Materials
7. Miscellaneous

Hyperlinks will be sorted into these six categories and then quantitatively explored to assess the volume of activity associated with the hyperlink (i.e. for a video the number of viewers, for a social networking group, the number of members). In this way, it is possible to analyze the degree of diversity in hyperlinks and the concentration of activity by the top contributors to the Facebook group's wall.

Hyperlink analysis is a methodological process that stems from pre-internet link analysis in social networking research. It has been used to chart the geographical distribution of internet hyperlinks (Halavais, 2000), the development of online social movements (Biddix and Park, 2008), and patterns of media access and political involvement (Park, 2002). In the present study it will be used to map the degree of actual openness in the April 6<sup>th</sup> Facebook group and the diversity of information sources being distributed on the Facebook group wall.

### *1. Other Social Networking Groups*

Users can post links to other social networking groups on the Facebook group's wall. These groups are classified first by the platform on which they are hosted, then by the creator and administrators of the group, then by the number of members in the group, and then by the type of group as defined by the creator of the group. This feature is available on most social networking sites and includes categories like politics or religion. If a category is not available for the group, this portion of the data set will be excluded.

On Facebook, there are three types of groups that can be developed by users, the "group," "event," and the "page." The page typically revolves around a specific user, most likely a celebrity and can also be used for businesses or specific topics. Events are structured notifications of offline events. Event pages detail the users who have been invited to the event, who is attending, the time and place of the event, and the event coordinator. Users



who are a part of the Facebook “pages” are called fans; users that are part of Facebook “groups” are referred to as members; and users who accept the invitation to an event are called attendees.

Given that there are more social networking sites, it is possible for users to link to outside groups. These different types of social networking sites will be described using the “platform.”

The main data points for these groups will be:

1. User Who Posted the Link
2. Platform
3. Group Size
4. Group Name
5. Group Website (if available)

These data points will allow for a statistical analysis between the users who posts the hyperlink and the content produced on the site. General data points, like group size and the amount of media on the social networking pages, allows for an assessment of the overall size and level of activity of the pages. This can be helpful in determining a correlation between top contributor involvement and the level of activity of a group.

## *2. Individual-Posted Media*

Hyperlinks to platforms that are devoted to hosting multimedia content uploaded by individuals, like YouTube or Facebook, can be categorized by the type of media posted, the member who posted the content, and the user name or member name that posted the content on the site. To gauge the level of engagement with the information, the number of page views will also be recorded in the hyperlink analysis. To determine if the web page is a user-uploaded media site, a common-sense approach will be taken. If sites offer free membership, and offer a free service to upload and search for already uploaded videos or audio, that site will be included in this category. The most likely sites to be included in this category will be YouTube and Facebook video.

## *3. Information Formatted as Journalism*

Information posted in the form of journalism is categorized by the platform, the

name or username of the author or producer (if available), and whether the publication also exists offline. The term journalism is used to define a style of information formatting not an assessment of content; as such, the degree to which the content follows journalistic standards will not be evaluated.

Examples of online media links that would be included in this category: blogs, online newspaper articles, and videos produced by news organizations and presented as such. This category may present problems if a webpage is published in a language other than English or if its site structure is not clearly that of a journalistic site. Web pages that are clearly blogs, online newspapers, or online video news they will be included. If a site is not obviously one of these but the researcher still has the impression that the site is formatted journalistically, the site will be researched to see if it has a reputation as being a news site or if it markets itself as a news site. If either of these is the case, then the site will be included in this category. This site will be further categorized as having an offline component. To assess this, the site will first be explored for information pertaining to a corresponding offline publication. If the website is not clear about its connection to an offline publication, research will be conducted to find out if the site has an offline counterpart. If it does, it will be considered an Online-Offline publication. If not it will be considered an exclusively online publication.

#### *4. Political Candidates*

Hyperlinks that connect users with websites of political candidates are included in this category. This group will be further categorized by the candidate, the politician's official political affiliation, and the type of media (photos, video, text). Facebook groups dedicated to the support of a political candidate will be included in the social networking category unless they are expressly managed by a political candidate's campaign. User-generated material about a candidate in the context of social media is still considered social media in this study and not the active public relations of a candidate unless the page is administrated by the candidate's campaign.

#### *5. Advertisements*

Given that Facebook attracts a large audience, a certain amount of advertisements on large Facebook group's walls can be expected. For that reason, links that direct users to

websites selling services will be categorized as advertisements. The proportion of top contributors that post advertisements will be analyzed, but the content of the sites will not be explored. Hyperlinks included in this category are links to sites that offer a service that is paid for. Sites initially suspected to be in this category will be explored for offers of service and payment.

## *6. Religious*

Given the importance of religion in Egyptian society and the documented presence of online activity promoting Islam, a certain number of hyperlinks can be expected to direct users to information about the religion. Hyperlinks in this category will be explored only in the context of the number of top users that post religion-related hyperlinks and the proportion of total links that are religion-related. The content of the hyperlinks will not be explored. Given that much of the text associated with religion will most likely be related to Islam, a religion whose texts are in Arabic, only sites that are clearly religious in nature will be included in this category. To determine if a site is religious in nature the homepage will be read for content directly relating to the promotion of a religion. If the site is in Arabic, versus from the Quran and references to Mohammed, Allah, the Quran, and Islam will be looked for using the Find function. To accomplish this in Arabic, the terms for each of the above will be translated into Arabic using an online translator. Because the translator will only be searching for single word terms, the likelihood that the translating service will misinterpret meaning is very limited.

## *8. April 6 Website*

The April 6<sup>th</sup> Group website was developed after the Facebook group grew in popularity and is the center of content for the movement but not the center of membership. The site's popularity lags far behind the Facebook group's but, because it is organized and controlled by an administrator and a small group of organizers, its message can be tailored for particular group goals. The April 6<sup>th</sup> Youth Movement operates a website, 6april.org. This website includes information about the group, the group's goals, group events, and news items that the website's publishers publish for the site's visitors. Hyperlinks directing Facebook group users to the April 6<sup>th</sup> URL will be counted and categorized by the user that

posts the hyperlink and whether that hyperlink directs users to the home page of the April 6 website or to specific pages within the site.

### *7. Miscellaneous*

The development of categories to establish relationships and analysis will inevitably lead to certain atypical websites that cannot be foreseen. The category “Miscellaneous” will be used to house websites that do not fit within the first six categories of hyperlinks. This category will be used sparingly, and the development of a new category, if several websites that are categorized as miscellaneous share consistent qualities, will be developed.

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## RELIABILITY OF QUALITATIVE CATEGORIES

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Given that the selection of categories and the placement of hyperlinks in specific categories is an arbitrary process that has been designed by the researcher, it is important to address the credibility of this process and its worth as a research tool. To effectively explore the hyperlink usage of the group, hyperlinks must be categorized in a qualitative way and then analyzed quantitatively. The categories above came from weeks of monitoring the group before the two-week constructed sample commenced. During this time, patterns were found and categories began to form.

As the sampling began the categories were developed. This process of developing categories as the data was collected prevented data from being decisively included in one category or another because the categories were not devised until the end of the sample collection. Though this made the categories more accurate and more inclusive for the hyperlinks ultimately collected, it had the potential of losing some data because it required that the researcher wait until the sample collection was complete before it visited the hyperlinks. A possible solution could have been to save the web pages as html documents at the time of the data collection, but that is not what happened in the present study. Because of this, there were sure to be websites whose content was removed by the poster or the administrator, making the links unreachable at the end of study when the hyperlinks were categorized.

Because of the potential for further degradation of the sample as web pages became unavailable, as much data as possible was recorded about each web page. The data described in the preceding category descriptions was captured and saved so that if any questions arose

during the data analysis that required other information to be properly answered, the data would be available for analysis. This catchall approach ensured that if the research led in another direction, that a lack of data would not undermine attempts to explore the subject more thoroughly. The hyperlinks that were dead ends will be addressed in the data analysis portion of this section.

## CHAPTER 5: DATA ANALYSIS

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### OVERALL GROUP ACTIVITY

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The first step in the analysis of the data collected is to explore the distribution of individual Facebook user activity to assess whether there is a small number of highly active members that contribute at considerably higher rates than other members of the Facebook group. The two-week constructed sample provides two data sets of activity: one weighted for significance of the individual contribution and one left unweighted for significance of individual contribution.

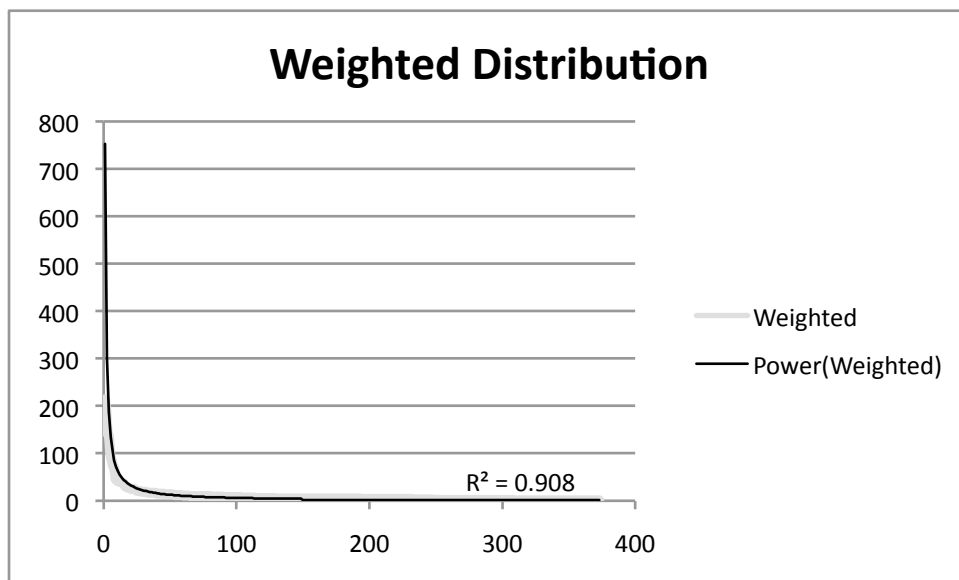
By measuring the activity in two ways it is possible to ensure that if there is an active user who engages in significant amounts of low-level activity he or she will not be left out of the group of top contributors. The two lists also allow for a more accurate assessment of the top contributors by assigning a higher value to more active forms of contribution. As outlined in the methodology chapter, participation on the Facebook group wall involves varying degrees of activity. The calculation of weighted contributions involves considering the degree to which a particular unit of activity was active or passive. The values assigned and methodological decisions concerning which actions were considered more active than others were catalogued in the methodology chapter. The unweighted sample assigns a value of one to each action regardless of that contribution's level of passivity. These two measurements were used to insure that members with a high volume of activity were properly compared to other users who may have contributed less but with more active forms of contribution. These two lists were merged to find the top users of the group and examine the distribution of member activity.

The group size fluctuated during the two-week sample but the mean group size during the data collection period was 74,898 members. Of these group members, there were 374 individual users that engaged in some type of activity on the Facebook group wall, meaning that only .5007% of users engaged in any type of activity on the central node of the network.

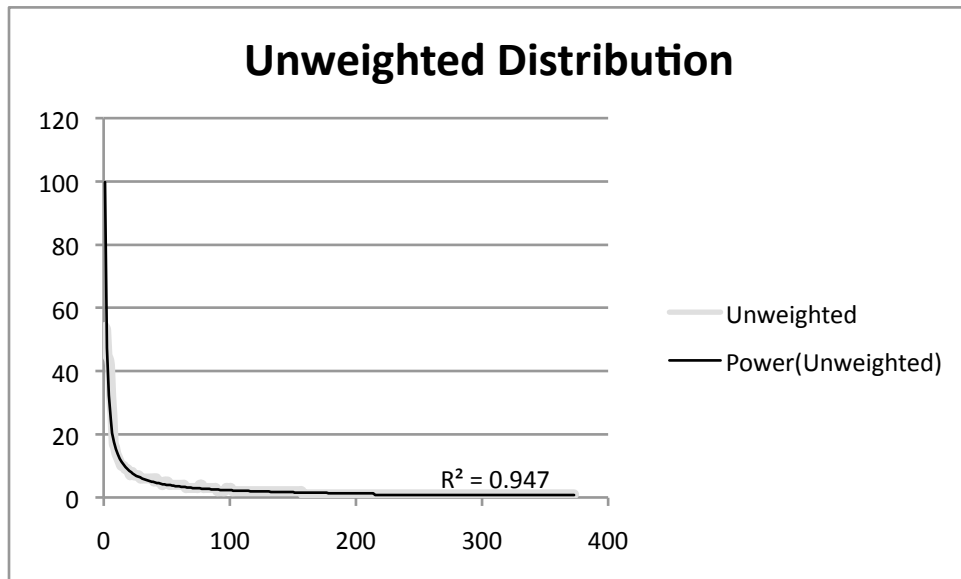
Three graphs below chart distribution curves of contribution of these 374 members. The first displays the weighted data points, the second the weighted data points, and the third the number of hyperlinks posted. The y-values are units of contribution (as defined in the methodology section) and the x-value units are integers assigned to the group members,

with one being the most active contributor, and 375 being the least active user. The y-values in the weighted graph are units of contribution multiplied by the values of the level of activity assigned in the methodology section. The hyperlink graph includes 374 x-values, but there were only 130 users that posted hyperlinks. The users who were active in some other way, but did not post a hyperlink, were not included in the graph.

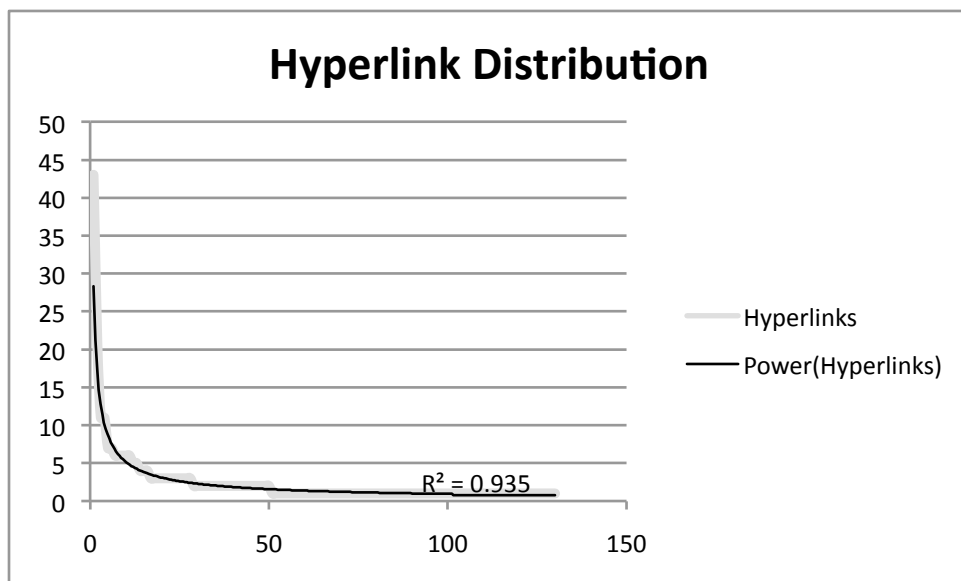
Note the extreme increase in contribution among the top contributors. This increase would be more pronounced if the 74,533 members who did not contribute during the constructed sample were assigned a value of zero on the y-axis the graph. Because this first phase of the analysis is meant to isolate the top *contributors*, a larger graph representing the entire group, including those that did not contribute is extraneous.



*Graph 5.1 indicates the volume of activity of each x-unit (individual user) assigned a value from 1 through 374, 1 being the most active user, 374 being the least active. The trendline measures the correlation between the data and a power-law distribution.*



Graph 5.2 indicates the volume of activity of each x-unit (individual user) assigned a value from 1 through 374, 1 being the most active user, 374 being the least active. The trendline measures the correlation between the data and a power-law distribution.



Graph 5.3 indicates the volume of activity of each x-unit (individual user) assigned a value from 1 through 130, 1 being the most active user, 130 being the least active. The trendline measures the correlation between the data and a power-law distribution.

The above graphs, at first glance, display a power law distribution. To confirm the prima facie pattern, a regression analysis was performed to test the degree to which a power law distribution explained the change in y as a relation to a change in x. The r-squared values were, in order of the graphs, .908 .947, .936. These r-squared values show that a high



percentage, between 90.8 and 94.7 percent of changes in the y-values can be explained by a changed in x-value when the data set is compared to a power law equation. The degree to which these data-sets follow a power law distribution would increase if the entire sample size, included those users who did not contribute were included.

**H<sub>1</sub>: A small group of active members contribute at exponentially higher levels than other members of the April 6 Youth Movement Facebook group.**

**H<sub>2</sub>: The small group of members hypothesized in H<sub>1</sub> set the media agenda for the Facebook group by contributing wall posts that hyperlink to online media at a significantly higher volume than the rest of the group.**

The first and second hypotheses are intrinsically connected to one another. If there is a small group of individuals that are highly active and hyperlinking is included in the measurement of activity, then those that are most active will hyperlink.

To assess the portion of total activity credited to the most active of the group, the distributions of the weighted and unweighted activity were studied for a shift in the slope of the line graph displaying the distribution. The high end of contributors – the top 20 – was selected from both the weighted and unweighted groups. Two lists were compiled: the top twenty contributors according to the weighted data collection and the top twenty contributors according to the unweighted data.

There are 16 users who appear in both top twenty lists. By merging the two lists, a comprehensive top contributors list was compiled and includes 24 users. For the remainder of the data analysis, “top contributors” refers to this list. The lists were merged to ensure a comprehensive list of contributors. If there was no overlap, the merged list would include 40 users. Given the considerable overlap, the list of top contributors is only 24. Coding activity and weighting it according to its level of passivity ensures a more comprehensive list of top users. The overlap in the two lists shows that those most active in sheer activity (unweighted) were also highly likely to be engaged actively (weighted).

The top 24 contributors were responsible for 42.32 percent of weighted activity and 39.54 percent of unweighted activity but only made up .029 percent of the whole group. By controlling for passivity in contributions, we can see that the most active users were more

likely to be active in terms of the type of post than in terms of the volume of posts, but were still significantly more active in both the unweighted and weighted activity than the vast majority of users.

This shows the importance of calculating activity using both weighted and unweighted coding. The use of weighted and unweighted measurements of contributors to the group makes it possible to have an overall view of the distribution of the activity in the group as a whole.

The next step in data analysis is to examine the hyperlinks in detail. To do this, all group members who posted at least one hyperlink during the two week constructed sample were listed. To better understand the types of hyperlinks posted and the types of links posted by top users, a more detailed analysis of hyperlinks by categories follows.

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## HYPERLINK ANALYSIS AND QUALITATIVE GROUPING

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During the two-week constructed sample, 340 hyperlinks were posted on the Facebook group wall. A hyperlink analysis was conducted to further explore the types of hyperlinks the most active members of the group posted to better understand the agenda setting activity and level of activity of top users.

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### TOP HYPERLINK POSTERS

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After the initial coding for activity, those users that posted hyperlinks were separated from the group of 375 contributors. The top twenty hyperlink posters were responsible for 40.8 percent of all of the hyperlinks posted. The level of contribution of each of the users that posted a hyperlink follows a power law distribution with an r-squared value of .936, meaning that 93.36 percent of variation of the y-variable can be explained by changes in the x-variable. (See graph 5.3) This pattern is even more pronounced when set in the context of the larger group of contributors, given that 65.24 percent of all contributors did not post hyperlinks to the group wall.

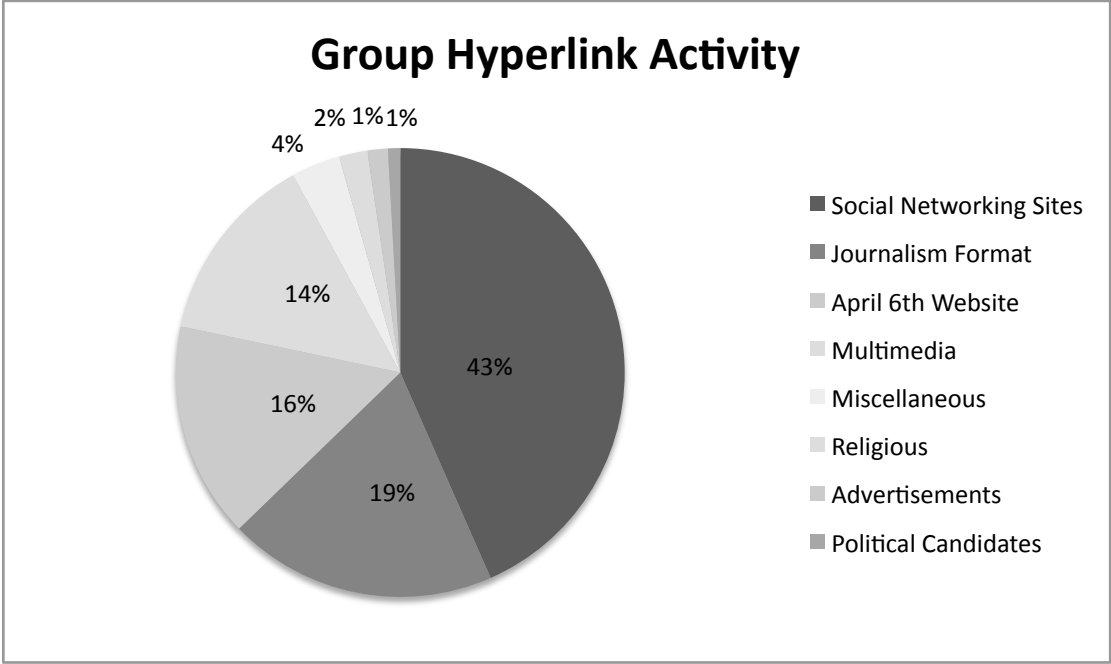
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### CATEGORIZING HYPERLINKS

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After the hyperlinks were categorized by type, the total number of each category of hyperlinks was divided into two groups, hyperlinks posted by top twenty hyperlink

contributors and hyperlinks posted by all contributors. The hyperlinks, as units of analysis, were then categorized by type. By calculating the proportion of each categories of hyperlinks and then calculating the proportion of each category of hyperlinks posted by the top twenty contributors of hyperlinks it is possible to rate the proportion of contribution from the top users and how their hyperlinking behavior is different than the behavior of the rest of the group.



Graph 5.4. shows the distribution by category of the type of hyperlinks posted by the group as a whole.

Hyperlink Categories		
<b>Social Networking Sites</b>	147	43.402%
<b>Journalism Format</b>	66	19.355%
<b>April 6th Website</b>	53	15.543%
<b>Multimedia</b>	47	13.783%
<b>Miscellaneous</b>	12	3.519%
<b>Religious</b>	7	2.053%
<b>Advertisements</b>	5	1.467%
<b>Political Candidates</b>	3	0.8798%
<b>Total</b>	340	100%

*Table 5.1. shows the proportion of hyperlinks directing users to eight different categories of web pages.*

An in-depth analysis of data related to each of these categories will be explored here. For a definition of what qualifies a site as any one of these categories refer to the methodology section.

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## SOCIAL NETWORKING HYPERLINKS

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Beginning from the most common category of hyperlink, other social networking web pages, analysis shows that of the 147 hyperlinks, 146 were Facebook hyperlinks, and one was a link to the April 6<sup>th</sup> Yahoo group. Twenty-three of the links to social networking web pages were to other April 6<sup>th</sup> web pages. Thirteen directly linked to groups supporting oppositional candidate ElBaradei, and given the range of time that the two-week constructed sample was collected, between October 2009 and February 2010, the number of references to ElBaradei were most likely lower than they would have been had the study been conducted later, and larger than if it had been conducted earlier given his entrance on the Egyptian political scene in late January of 2010. The type of Facebook pages can be further subdivided into types of Facebook web pages: groups, fan pages, notes, topics, profile pages, and events.

Type of Facebook Page	Number of Hyperlinks
Groups	95
Events	25
Notes	4
Topics	13
Profiles	1
Fan Pages	9
Total	147

*Table 5.2. shows a listing of the types of Facebook pages that were linked to by category.*

While a cursory analysis of the Facebook groups can be conducted to see the extent to which hyperlinks were linked to other April 6<sup>th</sup> pages or political figures, the majority of the pages' discussions and descriptions are written in Arabic. For this reason a content analysis of group content cannot be assessed in the present study without putting into question the data collected from such a study.

After the hyperlink categories have been explained, a measurement of hyperlinks leading to outside of the April 6<sup>th</sup> Movement will be assessed. Though this assessment was not introduced in the introduction, the patterns in the data collected during the two-week constructed sample encourage such an analysis.

## JOURNALISM FORMATTED HYPERLINKS

The second most common hyperlink category in the sample was the hyperlink to web pages containing journalistically formatted content.

Category	Online Newspaper	Blog	Newspaper	TV News	Online TV News
Hyperlinks	27	23	8	3	4

*Table 5.3 shows the distribution of hyperlinks in the various categories of journalistically formatted online media.*

The most common type of journalistically formatted content hyperlinked to was the online newspaper. The term online newspaper refers to a newspaper that is exclusively available online. This category is in contrast to the category for “newspapers.” Hyperlinks categorized as links to “newspapers” are articles on websites of newspapers that have a print edition. The “Online TV News” category includes web pages that contain video clips in a journalistic format that do not have an offline, television equivalent. This is in contrast to “TV News” web pages that host content produced by news organizations that also broadcast on television. All of the “TV News” hyperlinks were links to satellite television.

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### MULTIMEDIA

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The third most common category of hyperlink is the multimedia category. This group includes links to third party sites that do not manage the content posted, but rather host multimedia content uploaded by users. There were only three web sites included in this category – YouTube, Facebook, and ArabTV. The hyperlinks split between Facebook media (59.6 percent) and YouTube media (36 percent) with two hyperlinks directing users to ArabTV, a website that is formatted similarly to YouTube but has a significantly more limited audience. Of the hyperlinks to multimedia content on Facebook, eighty percent were links to the April 6<sup>th</sup> group’s photo albums. The YouTube hyperlinks were on average viewed 4171 times, and 3 of the nineteen videos were removed before their content could be viewed.

YouTube videos are categorized by the users that upload them. The videos posted on the Facebook wall were all labeled as “News and Politics” (62.5 percent), “People and Blogs” (31.25 percent), and “Music” (6.25 percent).

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### APRIL 6TH WEBSITE (WWW.6APRIL.ORG)

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Of the total number of hyperlinks posted, 15 percent were to the April 6<sup>th</sup> website. Twenty-one out of fifty-three hyperlinks to the website were to its homepage, twelve were to press releases from the group, and the remaining twenty were links to other pages within the site.

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### ADVERTISEMENTS, RELIGIOUS SITES, AND MISCELLANEOUS

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Of the hyperlinks posted, only five were links to advertisements, seven were links to religious sites, and five to miscellaneous sites.

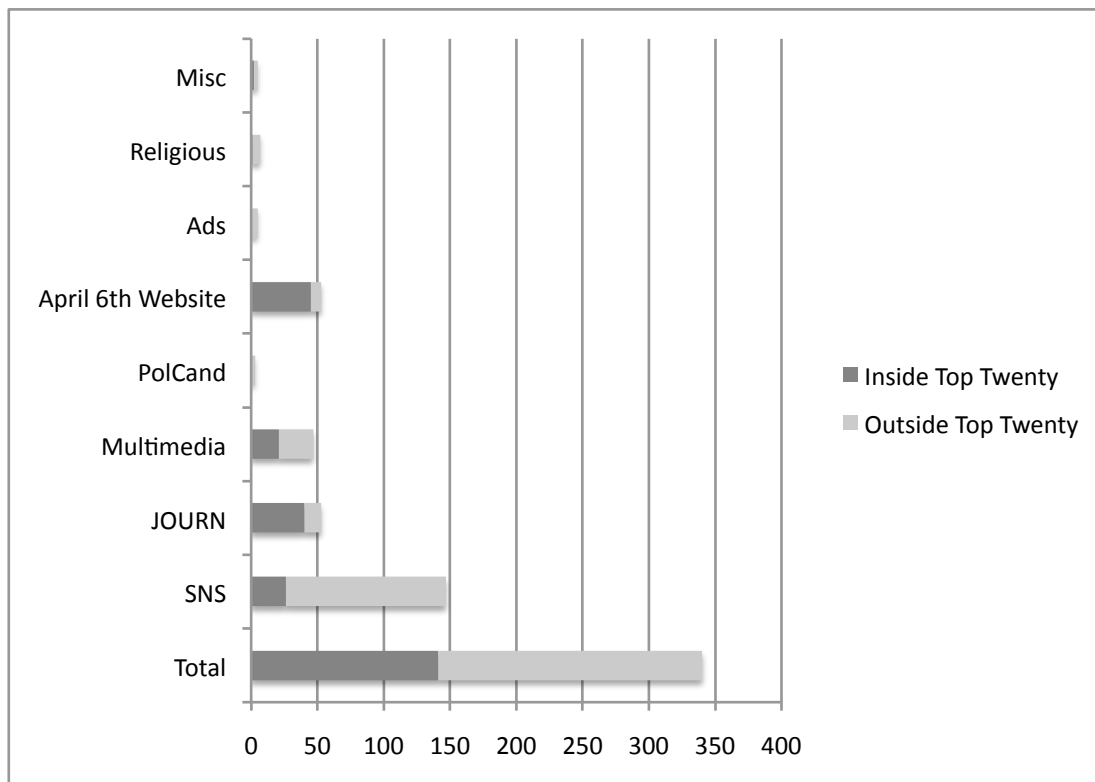
#### TOP USER HYPERLINK CHOICES

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After summing up the activity in each type of category, the next methodological step is to measure the extent to which elite contributors were responsible for each category. The purpose of this analysis was to assess the degree to which the most prolific contributors opened up discussion using outside information. This analysis speaks to the agenda setting of these opinion leaders. Below is a table of the proportion of all hyperlinks in each category that were posted by the top twenty hyperlink posters. By comparing each of these figures, it is possible to locate more commonly linked sites by top contributors.

	<b>Total Hyperlinks</b>	<b>Proportion by Top Users</b>
<b>April 6th Website</b>	53	84.91%
<b>Journalism</b>	66	60.61%
<b>Multimedia</b>	47	44.68%
<b>Miscellaneous</b>	5	40.00%
<b>SNS</b>	147	17.69%
<b>Religious</b>	7	14.29%
<b>Political Candidate</b>	3	0.00%
<b>Inside April 6<sup>th</sup> Sphere</b>	101	61.38%

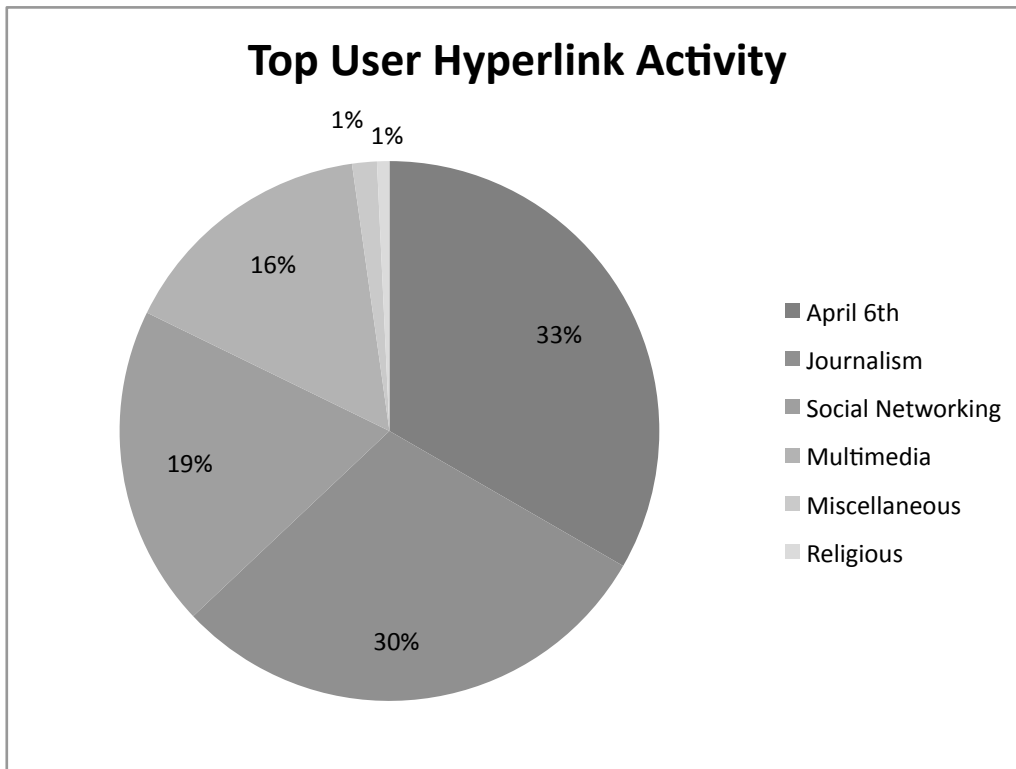
*Table 5.4. shows the distribution of hyperlinks of top users by category.*



*Graph 5.5. shows the proportion of hyperlinks by category for the group as a whole and for top users.*

These numbers were calculated by dividing the number of hyperlinks posted in each category by a user in the top twenty of hyperlink posters by the total number of hyperlinks in the given category. At the outset of the hyperlink analysis, it was determined that 40.8 percent of all hyperlinks posted were posted by users in the top twenty hyperlink posters. The percentages in the table above show that top users are disproportionately more likely to post hyperlinks that direct others to web pages inside the April 6<sup>th</sup> Sphere. It also shows that they are disproportionately more likely to post a hyperlink to the April 6<sup>th</sup> website than they are to post a link to an outside news source. Interestingly, they are also far less likely to post a link to another social networking web page than they are to almost any other web page of substance (this category of substantive web pages excludes advertisements, miscellany, or religious content). To ensure that the percentages in the last table are not affected by the size of categories, another calculation was completed.





Graph 5.6. shows the distribution of hyperlinks posted by top users by category.

	Number of Hyperlinks	Percentage by Top Users
<b>April 6th</b>	45	33.33%
<b>Journalism</b>	40	29.63%
<b>Social Networking</b>	26	19.26%
<b>Multimedia</b>	21	15.56%
<b>Miscellaneous</b>	2	1.48%
<b>Religious</b>	1	0.74%
<b>Political Candidate</b>	0	0.00%
<b>Advertisements</b>	0	0.00%
<b>Total</b>	135	100.00%

Table 5.5. shows the distribution of all hyperlinks by top posters in each category.

A similar pattern appears in this presentation of data. The most common hyperlinks of posters in the top twenty hyperlinkers was the April 6<sup>th</sup> website, followed by journalism

formatted articles, but in this calculation, the third most hyperlinked site by the top twenty contributors was social networking sites, not multimedia.

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#### INSIDE AND OUTSIDE APRIL 6TH SPHERE

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To assess the degree to which users hyperlink to data sources outside of the April 6<sup>th</sup> Youth Movement (it's Facebook group and its website) hyperlinks were also coded as either directly related to the April 6<sup>th</sup> Movement or outside of the April 6<sup>th</sup> Movement. Of the 340 hyperlinks, 101 were directly connected to the April 6<sup>th</sup> website or the April 6<sup>th</sup> Youth Movement Facebook group. This data can be used to explore the degree to which users post to information outside of the group.

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#### THREE DAYS OF EXTERNAL POLITICAL ACTIVITY

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In line with the fifth hypothesis, three days outside of the two-week data sample were collected. These days were selected for their political significance. The three days were February 19<sup>th</sup> 2010, April 6<sup>th</sup> 2010, and April 7<sup>th</sup> 2010. The first was the day before Mohamed ElBaradei returned to Egypt from Geneva. This day was selected to explore the April 6<sup>th</sup> Youth Movement's response to another Facebook group – in this case ElBaradei – gaining a rush of popularity and attention. The second and third days are directly related to the April 6<sup>th</sup> protest discussed in the socio-political background section of this paper. The Facebook activity on these days is an important data set if one is to better understand the group's make-up and how its members react to external events.

To effectively compare the activity during the two-week sample to a single day of activity it is first necessary to establish a baseline for a single day. To do this, data from the two-week constructed sample will be broken down into an "average" day. From this baseline, the differences in activity can be quantitatively measured.

The table below displays the sums of the all of the weighted and unweighted activity in the two-week sample and the sum of all of the hyperlinks posted during the sample. These totals are then divided by 14 for an "average" day's activities.

	<b>Total Activity</b>	<b>Average Day</b>
<b>Hyperlinks</b>	340	24.28571429
<b>Unweighted</b>	1115	79.64285714
<b>Weighted</b>	3370	240.7142857

*Table 5.6. shows the mean level of activity per day during the two-week constructed sample.*

The average day calculation provides a solid comparison with the totals in the proceeding data sets.

The return of Mohamed ElBaradei to Egypt resulted in an extremely high level of activity – in comparison to the two-week constructed sample – on the April 6<sup>th</sup> Facebook group wall.

	<b>February 20th</b>	<b>April 6th</b>	<b>April 7th</b>	<b>Average</b>	<b>Two-Week Sample</b>
<b>Proportion of Hyperlinks By Top Five Users</b>	68.75%	26.50%	33.64%	42.96%	27.35%
<b>Number of Different Hyperlinking Users</b>	23	64	59	49	9
<b>Total Number of Active Users</b>	42	390	275	236	28
<b>Hyperlinks</b>	80	119	111	103	24
<b>Weighted Activity</b>	533	2805	2521	1953	241
<b>Unweighted Activity</b>	123	1065	1058	749	80

*Table 5.7. shows a cross section of data for each of the three days of external political activity compared to the data collected during the two-week sample.*

As Table 5.7 shows clearly, the activity on the Facebook group's wall far exceeds the volume of activity of the average day in the two-week constructed sample. There was an increase of between 333 and 496 percent in the number of hyperlinks posted; an increase of between 154 and 1,331 percent in the volume of unweighted activity; an increase of between 222 and 1,164 percent in weighted activity; an increase of 256 and 711 percent in the diversity of the users posting hyperlinks; and an increase of between 150 and 1,393 percent in the diversity of active users.

The concentration of links posted by top users is the only measurement that was not consistently higher in the days of political activity and the days during the two-week sample. This data point is difficult to compare however because during the two-week constructed sample, the top twenty hyperlinkers were responsible for 27.35 percent of all hyperlinks. During the single day samples, the top five hyperlinkers were responsible for 68.75, 25.50, and 33.64 percent of all of the hyperlinks posted on the given days.

While the volume of activity was quite clearly higher in the single political day set, the proportion of users posting hyperlinks in specific categories did not trend as clearly.

All Users	February 19th	April 6th	April 7th	Average	Two Week Sample
Journalism	12.50%	41.03%	33.64%	29.05%	19.36%
SNS	25.00%	23.93%	31.82%	26.92%	43.40%
Multimedia	16.25%	27.35%	20.00%	21.20%	13.78%
Misc	1.25%	0.00%	7.27%	2.84%	3.52%
April 6th Website	45.00%	6.84%	7.27%	19.70%	15.54%
Advert	0.00%	0.85%	0.00%	0.28%	1.47%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%

Table 5.8. shows the proportion of hyperlink categories of the entire group in each sample set.

Top Users	February 19th	April 6th	April 7th	Average	Two-Week Sample
Journalism	14.55%	64.52%	37.84%	38.97%	29.63%
SNS	5.45%	19.35%	37.84%	20.88%	19.26%
Multimedia	21.82%	16.13%	0.00%	12.65%	15.56%
Misc	0.00%	0.00%	0.00%	0.00%	1.48%
April 6th Website	58.18%	0.00%	16.22%	24.80%	33.33%
Advert	0.00%	0.00%	0.00%	0.00%	0.00%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%

Table 5.9. shows the proportion of hyperlink categories for top users in the group in each sample set.

The first important point to make about these two data tables is that the “Top User” table for the three, single-day entries includes the top five hyperlinking posters. This is in contrast to the two week sample entry which calculates the percentage of each category of hyperlink for the top 20 hyperlinking posters. This inconsistency in calculation could have potentially skewed the data to be incomparable, but given the size of the two groups – the two-week sample consisting of considerably more hyperlinking posters than the three, single-day samples – the number of in the “top user” category needed to be considerably smaller.

The percentage of each category attributed to the top users in the three single-day data sets were averaged to make them more easily comparable to the two-week sample.

### *Journalism*

There was an obvious surge in the proportion of hyperlinks categorized as journalistically-formatted in the single-day samples. This increase is clear in both the group at large and the top users for the day.

### *Social Networking Sites*

The proportion of hyperlinks to social networking sites was higher in both the group as a whole and the top users when the percentages were averaged, but there is a clear difference between the single-day samples and between the group as a whole and the top user subset. These differences will be addressed in the discussion chapter because they must be placed in the context of the external political events.

### *Multimedia*

The single-day sample sets included a higher level of multimedia hyperlinks in the group as a whole, but a lower level in the top users.

### *April 6<sup>th</sup> Website*

The April 6<sup>th</sup> website was linked to significantly more in the February 19<sup>th</sup> sample than any other data set. The website was linked to significantly less in the April 6<sup>th</sup> and April 7<sup>th</sup> samples by both the group as a whole and the top user subset. This can largely be explained by the fact that the Egyptian government shut down the April 6<sup>th</sup> URL on the day of the April 6<sup>th</sup> protest, ostensibly to jam communication between group members. The same low

percentage of hyperlinks can also be seen in the group as a whole on April 6<sup>th</sup> and April 7<sup>th</sup>. The website was not returned to service until the middle of the day on the 7<sup>th</sup>.

## OVERALL RESULTS

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The data collected in the two-week constructed sample and politically intense single-days largely confirmed the hypotheses set forth in this study. There was, however, significantly less hyperlinking to journalistically formatted web pages than was expected. While there was no proportion projected in the hypotheses, the premise of the Facebook group as a news information filter with agenda-setting properties was undermined by the lack of news sites linked to. This unexpected result encourages further research pertaining to the organizational properties of the group rather than its role as a news sphere set apart from the traditional information environment. The structural elements of the April 6<sup>th</sup> group that are reinforced by hyperlinking within the group's sphere deserve further study to assess the extent to which top users form an organic, flexible hierarchical structure through participation and linkage to web pages hosting information directly outlining the group's agenda. This is in contrast to hyperlinking information providing offline political context to the group's goals rather than the goals themselves and points to information delivered to further collective organizational intent rather than to foster an open discursive sphere.

## CHAPTER 6: DISCUSSION

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The first hypothesis of the present study, that a small group of members of the Facebook group would be disproportionately responsible for overall activity, was conclusively affirmed by analysis of the data. While not surprising given the overwhelming amount of research that aligns with this hypothesis, this result is not a promising indicator for the ability of social media to open an egalitarian sphere of discussion. Though the online group is open to everyone that chooses to join and contribute, the small group who chooses to more actively engage on the Facebook group wall unavoidably eclipses the more limited actions of other members. While analysis of other social systems has led researchers to conclude similar patterns of unequal contribution, that same pattern, when applied to a group like the April 6<sup>th</sup> movement, undercuts its potential as a radical shift in political dialogue.

It is important to recognize that membership to the group has a low barrier of entry to those who already have an account of Facebook. For that to be possible, an individual must first be literate. This means that only sixty percent of Egyptians meet the first basic requirement. A second barrier of entry to the group is that an individual have some access to the internet. This means that he or she must fall into the group sixteen percent of Egyptians—access at internet cafes where computers are provided, ownership of a computer that can access internet networks, employment that grants internet access, enrollment in schools that provide internet access, or a home computer with access. Because it is unlikely that an individual with internet access would be illiterate, these two categories can be conflated. Therefore it is possible to conclude that only sixteen percent of Egyptians have the requisite opportunities to engage in the April 6<sup>th</sup> Facebook group.

Even individuals with access to internet at cafes are limited by the presence of government surveillance. Surveillance may lead to intimidation which in turn discourages online participation in political dialogue, activity, or information access.

These barriers to entry shape the make-up of the Facebook group. While overarching analysis of social media users in Egypt has not been conducted, a correlation between socioeconomic levels and internet use have been documented. The wealthier and more educated the individual, the more likely they are to have access to the internet, a logical finding. (Alterman, 2000)

These barriers to entry are far more significant in terms of the generation of an online public sphere than the membership of the Facebook group, but also show that a group of more than 70,000 that is engaged in a stated political opposition group more striking than a group of its kind in a nation that is more connected. However, it ensures that the group is comprised of individuals from a very small segment of society, a group that is not a proper representation of the nation as a whole. In so far as the segment of society represented by those engaging in social media is likely also the group from which viable political candidates and actors comes, perhaps discussion and connectivity between actively engaged individuals does promise a more cohesive opposition movement. This development, while important for the legitimacy of the traditional public sphere and a coalesced opposition movement, the result of such organization is a political sphere far removed from the population at large, but an important space for dialogue nonetheless.

Moving from social media access and political involvement to the actual mechanisms of the group itself, this issue of a skewed representation of a small group worsens. As seen in the data analysis, a small group of users are responsible for much of the activity in the group. This conclusion does not necessarily exclude a healthy format for discussion. The two-step flow of communication model outlined in the theoretical portion of this paper offers an interesting model for the group's dynamics. Perhaps these top contributors are more active online readers just as the opinion leaders in two-step flow model research are more active news consumers. If these contributors are the most active posters because they are the most active consumers of news media then it is possible that they can be considered the opinion leaders of this group.

In that case, these top contributors would be playing an important role in the dissemination of information across the internet. Their role would be to scour the internet for information, choose which information most relevant to be republished in the form of a hyperlink, and then republish the information for individuals within their online social networks to consume and discuss. This process of republishing was defined in the theoretical background of this paper as "gatewatching" and the small group of active republishers "opinion leaders." The data bears out a similar distribution structure to both the two-step flow of communication and the "gatewatching" concept set forth in Bruns (2005).

As displayed in the data analysis section of the present study, the top twenty posters of hyperlinks were responsible for 41 percent of all hyperlinks. The top twenty-four users, as



an aggregate of their unweighted and weighted activity, were responsible for 39 percent of all activity including hyperlinks.

Despite this clear evidence of a defined hierarchy of participation, the top contributors did not necessarily fulfill the role of the avid news consumer that shares relatively more information with his or her personal level networks set out in the “two step flow of communication” model. And while they fulfilled the role of the “gatewatcher” by republishing information that was originally made available elsewhere online, their activity did not constitute an aggregate news feed for public discussion. Most of the activity was self-referential to the April 6<sup>th</sup> Group or to other social networking web pages. This pattern of linking is more reminiscent of an agenda-setting model than of an impromptu development of a public forum for open political discussion. The important distinction between the opinion leader hyper-participation and an agenda-setting model is that in the latter there is intentional effort to drive the conversation in a specific way. For the most active of the April 6<sup>th</sup> Movement group there seems to be more intent and effort (as indicated by the volume of total posts and the concentration of the categories of posts) by the top contributors to post information about the group than information for open discussion on the group’s forum.

The hyperlink analysis shows that 30 percent of hyperlinking activity linked to web pages that were inside the sphere of the April 6<sup>th</sup> movement. Hyperlinking out of the Facebook group is the primary way for users to distribute information to inform and direct discussion. All other forms of activity, such as wall posts that do not include hyperlinks, comments that do not include hyperlinks, and “likes” are necessarily embedded in the Facebook group and are therefore subsumed under the category of information that falls within the April 6<sup>th</sup> sphere. Despite the informative power of hyperlinking, of the proportion of the group during the two-week sample who engaged in any activity at all -- .5 percent -- only 35.2 percent posted any hyperlinks at all. This means that of the entire group, only .17 percent posted any hyperlinks during the two-week constructed sample.

The low percentage of hyperlinking members reaffirms the power law distribution of the group’s activity, but it also calls into question the role of the hyperlink in the group’s discursive sphere. If so few individuals use the hyperlink, does this imply that the hyperlink is not important? I argue that the scarcity of the hyperlink makes it even more important, given the way in which browsing the internet is conducted. Because very few individuals

hyperlink, there are fewer options for group members or visitors that are reading the Facebook group's wall to choose from. Fewer options means a higher likelihood that a visitor to the group's web page will visit a given hyperlink. If an active user posts a hyperlink, and there is a higher likelihood of someone that is reading the wall to visit the link, then the impact of that hyperlink is greater because it is more likely to be read and responded to on the group's wall. This gives the more active users, specifically the more active users that post hyperlinks, a much more critical role in setting the discursive agenda.

It is important to emphasize that the group's most active members are only privileged by the nature of their own actions. If other group members were motivated to post other information, there would be no barrier preventing them from doing so. This feature of the open group dynamic differentiates itself from the traditional agenda-setting model in that it is not the activity of those at the top of a defined hierarchy – i.e. newspaper publishers, editors, and reporters of traditional offline media – that are in control of information dissemination. The traditional agenda setting model, as applied to offline media, would explain the behavior and effect of these top contributors by alluding to their position in a well-defined hierarchy.

The fusion of the agenda-setting and opinion leading roles – whereby lay individuals with more interest in current affairs and more willingness to discuss events influence a larger numbers of other individuals by determining what information is available – has not been applied to a group like the April 6<sup>th</sup> Youth Movement. Neither the agenda-setting model, nor the two-step flow of communication model, was applied to online social networking until fifty years after their development. For that reason there are not defined media science models for the uncontested rise of an elite subset of users in an open group. (Nisbet and Kotcher 2009) The gatewatching model attempts to explain the supplanting of the traditional media hierarchy by the online individual who posts hyperlinks. Bruns, however, does not examine online social networking where news information is often a secondary product of social gathering and discussion, but rather the online aggregation of news in sites like Digg and Reddit.

Group formation and the development of a hierarchy through distinction in individual levels of contribution and eventually a hierarchy of agenda-setters is more difficult to map when the case involves an egalitarian formation of individuals in a group. This development is further problematized by the fact that the group is both a subset of a

larger social media site and a group that is attempting to transition from the pages of Facebook to pages in the wider internet and simultaneously transition from an online group to an online/offline group. To move as a group, individuals must take charge, even if taking charge does not involve the development of a rigid power structure. The hyper-participation of the leaders of this groups actions does not preclude others in the group from increasing their level of activity and thereby taking increasing levels of control.

The creation of the group itself and the titling of it as a “Movement” inevitably assigns intention. This intention embeds a goal-oriented element that precludes a sense of an open sphere and replaces it with a targeted aim and therefore targeted content. This is in line with the fact that the April 6<sup>th</sup> Movement, after establishing traction on Facebook, developed a website devoted to the group’s activities. Sixteen percent of hyperlinks posted during the two-week constructed sample were links directly to the pages of the April 6<sup>th</sup> website (6april.org). The tension between the April 6<sup>th</sup> Youth Movement as a forum for discussion and as a movement is not explained merely by a semantic analysis of the title of the group. And while definitively assessing the degree to which the group is a movement or a forum for discussion is outside the present study, it is important to consider when addressing the evidence presented in the present study. This distinction would make it possible to more clearly examine the structure in place and its role in the media that is sourced during group discussion, if it can be considered discussion and not a platform for the intentional agenda setting of a small group of individuals.

The definitions or theoretical framework for defining the April 6<sup>th</sup> Youth Movement as one with orchestrated organizational capacity (either officially assigned or organically developed) is outside of the limited scope of this paper, but it is an important topic that should be addressed more extensively than is done so here.

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## HYPERLINK CATEGORIES

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A detailed categorization of the hyperlinks posted during the two-week constructed sample makes it possible to map an informational framework within which discussions on the Facebook wall take place.

The largest category of hyperlinks – comprising 43 percent of all hyperlinks – was the group of hyperlinks to other social networking web pages, all but one of which were other web pages on Facebook. This result supports the skeptical view of researchers who

point to the low barrier of entry for Facebook groups as a measure of their ineffectiveness: if an individual can simply join a group by clicking on a link they are less likely to be seriously engaged in its activities. If the majority of hyperlinks are links to other groups, then the major informational activity on the Facebook group's wall is simply a series of invitations to other groups.

This conclusion, that membership in a Facebook group is not an indication of commitment is clear in the proportion of users who contributed anything to the group during the two-week constructed sample. Only 375 members – or one half of one percent of the group as a whole – engaged at all with the April 6<sup>th</sup> group during the two-week constructed sample.

The hyperlinks posted that did direct users to Facebook groups were largely advertising groups that were apolitical in nature.

The second most common category was less than half of the size of the first. Only twenty percent of hyperlinks directed users to web pages formatted as journalism. Because these links are to web pages of online content, and there is a documented availability of alternative news online in Egypt, it was expected that a large proportion of hyperlinks would lead users to sites that contained analyses of political developments to better inform those who were discussing issues in the group. This was not the case. Though there was a smaller than expected number of hyperlinks to journalism web pages, the proportion of sites that were hosted by groups that had no offline equivalent is in line with the second hypothesis, that users would hyperlink to sources with only an online presence thereby avoiding news sources that were controlled by government mechanisms. Eighty percent of hyperlinks to journalism-formatted web pages were linked to media that is exclusively available online.

Hyperlinks that direct users to sites that host multimedia content uploaded by users was the fourth most popular category of hyperlinks, behind hyperlinks to social media sites, journalism formatted sites, and the April 6<sup>th</sup> Youth Movement website. The hyperlinks split between Facebook media (59.6 percent) and YouTube media (36 percent) with two hyperlinks directing users to ArabTV, a website that is formatted similarly to YouTube but has a much more limited audience. Of the hyperlinks to multimedia content on Facebook, eighty percent were links to the April 6<sup>th</sup> group's photo albums. The YouTube hyperlinks were on average viewed 4171 times, and 3 of the nineteen videos were removed before their

content could be viewed. The high proportion of “News and Politics” videos – sixty two percent – shows that users are encouraging discussion of political topics.

Despite this political engagement, there were only three hyperlinks directing users to political candidate websites. This could be evidence of a lack of political engagement or simply a lack of engagement with the traditional political sphere. There were, for instance, links to other social networking sites that organized solely around political candidates. These groups were not included in the political candidate website category because they were organized by individuals outside of the political candidates’ campaign and allowed for discussion on the Facebook group wall. That means that these groups were not arbiters of a synchronized and intentionally developed message of a candidate, but were rather a platform for supporters to express support and discuss the candidate’s worth. This open platform precluded these social networking pages from the category of concerted campaign propaganda.

The most commonly hyperlinked social networking group that was focused on a political candidate was the Facebook page of ElBaradei, and this case deserves special attention.

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#### MOHAMED ELBARADEI ONLINE SUPPORT

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Mohamed ElBaradei, the Nobel Peace Prize laureate and former director of the International Atomic Energy Agency, returned to Egypt from Geneva in February 2010 to a crowd of supporters that openly encouraged him to run for president against Hosni Mubarak. ElBaradei openly discussed the current political state in Egypt in November of 2009 (Dunn 2010) prompting political analysts to speculate about his potential run in the 2011 presidential race. Despite the fact that ElBaradei is not eligible, according to the current constitutional framework, to be a presidential candidate, a Facebook group encouraging ElBaradei to run in the 2011 presidential elections grew from 3,000 to over 200,000 in twelve days. At the time of this writing, the group had 212,000 members. This growth of the Facebook group was in tandem with a blitz of media coverage, both locally and internationally. The weeks leading up to his return to Egypt on February 20<sup>th</sup> 2010, coverage of ElBaradei has been the primary focus on the election. Facebook’s main contribution to his rise in popularity is its assistance in quantifying the level of support for an idea or a candidate in terms of numbers of members.

The structure of Facebook also allows candidates who seek online support the opportunity to use the personal level networks of supporters on Facebook to disseminate hyperlinks directing other users to the candidate's URL or the candidate's Facebook group. This type of connectivity moves much faster than the regime could hope to contain and once it reaches a critical mass the government is in a weakened position in that it cannot punish all of those supporting the candidate online, so punishing any one can incur the wrath of the others.

The size of support for ElBaradei dwarfs the size of the April 6<sup>th</sup> Youth Movement group members, preliminarily indicating that without a figurehead, political protest may be too disorganized to incite consistent activity in Egypt. And interestingly, the regime has had a difficult time preventing ElBaradei from garnering support. Regime supporters have called ElBaradei a "virtual candidate" and has implied that the candidate is a representative of an elite sector of society and does not relate to average Egyptians. These claims were publically rebuked by ElBaradei at his first public events – which were highly attended by a diverse group of supporters – in Egypt since his return in February. The ability of ElBaradei to mobilize support online around his "National Association of Change" group that seeks to amend the constitution to allow for free elections and the election of independent candidates<sup>24</sup> is a test case that, while outside the research of the present study, nevertheless will prove to be an interesting case in the context of the research presented here. While the use of Facebook and the political organization aspects of ElBaradei's is similar in many respects to the April 6<sup>th</sup> Youth Movement (in its size, quick growth in popularity, coverage in international media, and political aims) it is quite different in the organizational sense in that it is headed by a leading figure, ElBaradei himself. Though the existence of a figurehead gives the group a prima facie hierarchy, the eligible contributors (any Facebook user) of the group's forum and the openness of the Facebook platform is the same as it is in the case of the April 6<sup>th</sup> Youth Movement. Further research on the successes and failures of ElBaradei to mobilize online support into offline support would provide more information on the hypotheses presented and research conducted in the present paper.

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<sup>24</sup> Currently, the constitution allows only for candidates who are official members of political parties that hold 5 percent of the seats in Parliament to legally run for the nation's highest office.

While further study of the ElBaradei group is not possible, the reaction of the April 6<sup>th</sup> Youth Movement to ElBaradei's return was documented by conducting an extra day of data collection on February 19<sup>th</sup>, the day after ElBaradei returned to Cairo from Geneva. This data sample provides an excellent test of the reaction of the group to outside changes in the political sphere, particularly changes in the landscape of the oppositional political movement. The reaction of the April 6<sup>th</sup> Youth Movement to the ascent of an individual that is at the forefront of another Facebook movement is key to understanding the relationship between the compartmentalized movements in the Egyptian opposition and the interaction between individual Facebook groups in the online political sphere. Does the older group (in this case April 6<sup>th</sup>) acknowledge the introduction and growth of another group? Does the group encourage other members to visit the new group's Facebook group web page? From the data collected immediately after ElBaradei's return to Egypt is evidence that both of these questions can be answered in the affirmative.

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#### OTHER HYPERLINK CATEGORIES

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Other negligible amounts of activity of hyperlink categories were advertisements and religious content. The number of hyperlinks promoting advertisements was surprisingly low – only 4 throughout the two-week sample. With a group as large and public as the April 6<sup>th</sup> Movement, the number of advertisements could have been far larger. One risk of an aggregated audience is that the site will devolve into a forum for advertisers. This was not the case in the present study.

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#### HYPERLINK ACTIVITY OF TOP CONTRIBUTORS

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The hyperlink categories provide an overview of the information environment of the Facebook group, but it is the interplay between the most active users and the hyperlink choices that they make that is the aim of the present study. To judge what the preferred links for the top users were, an analysis of the hyperlinks by category and then by the number of those links that the top users posted, gives an idea of how the agenda is set by the opinion leaders.

The top twenty hyperlink posters were responsible for 40 percent of all hyperlinks. This total sets a baseline for comparing the proportion of links in each category of the same

top twenty. It is interesting that top users were responsible for only 17.5 percent of all of the links to social networking web pages, and were responsible for 60.6 percent of links to sites formatted journalistically and 84.9 percent of links to the April 6<sup>th</sup> website. The high level of top user activity in the April 6<sup>th</sup> website category can be contributed almost solely to the top overall contributor who singularly posted 27 links to the web site. This type of skewing is to be expected in the power law distribution of participation, because that top user is likely to be contributing twice as much as the second most prolific contributor and 16 times more than the fifth most prolific contributor. In this particular instance however, the top contributor was even more disproportionately responsible for links in the April 6<sup>th</sup> web page than the power law distribution would suggest.

This finding undercuts the idea of the group as an egalitarian discursive sphere because it shows the development of an increasingly more rigid structure of discussion. If the platform of discussion consistently returns contributors to content that is controlled by a small group, in this case a website that hosts content orchestrated by a small number of individuals (webmaster and administrators), the platform of discussion gradually becomes the expressive output of a small, organized group.

That is not to say that the power law distribution in open social systems, whereby the top contributor is exponentially more active than other users, necessarily constitutes a hierarchical structure. But this type of distribution where a group's organized content is commonly referred to does limit the extent to which a discussion becomes communication between members of an organization and not an open sphere where a wide-swath of individuals can openly discuss a variety of opinions and real world developments in a constructive way.

This high level of linkage to other web pages inside the April 6<sup>th</sup> group's sphere – 32 percent of all links – is partially mitigated by the high percentage of top users who linked to journalistically-formatted sites. If 60 percent of all web pages linked to that were journalistically formatted were hyperlinked by top users then it could be argued that these same top users who largely linked to content within the group's sphere, were also disproportionately more responsible for web content that provided outside information. However, the low number of links to journalistically formatted content – only 53 links out of 340 – shows that these types of links were far less common than links inside the group's sphere. For this reason, the high proportion of links posted by top users that directed other



members to content outside of the sphere made up a much smaller portion of overall activity.

If these top twenty contributors are examined as the main posters of hyperlinks, then it is these top posters that are making the largest impact on the content of the discussion forum. That is not to say these posters ascended to power of the group by limiting the participation of others, but rather they contributed consistently (the primary reason for the two-week constructed sample over a six month period) and in frequency (explaining the power law distribution of contribution). By sheer volume of contributions, the top twenty posters greatly increased the likelihood that the information they posted would be seen by others in the group. By contributing so frequently, these posters took on the role of opinion leaders in the group. They chose to share information that they found online in the form of hyperlinks more often, indicating that they spent more time online, were more actively engaged with online content, and felt the need to share that information with individuals inside their online network.

If this is the case, then it is disappointing that top posters are more likely to post hyperlinks leading other users to the April 6<sup>th</sup> Youth Movement website as opposed to contextual information about the very issue the group seeks to address. It is promising that the top users are responsible for a dominant percentage – 60 percent – of the journalistically formatted articles, but it would be more promising if the number of links that top users posted to the site that added outside information to the discussion was higher in a true sense and not just proportionally.

An important finding of the data collected in the present study is the substantial change in the overall volume of activity on days of particular political significance. This data supports the fifth hypothesis of the study. If the previously discussed finding – that a large proportion of hyperlinking involved references to web pages inside the April 6<sup>th</sup> sphere – indicated that the April 6<sup>th</sup> group was unresponsive or unconcerned with external information sourcing, the large amount of support for ElBaradei during the 19<sup>th</sup> of February sampling would likely have been less substantial. The jump in activity on April 6<sup>th</sup> and April 7<sup>th</sup> is not surprising given that the day of protests is the centerpiece of the group. But the sustained increase in volume of activity on April 7<sup>th</sup> displayed the importance of a forum of discussion that transcends the offline protests and enables continued discussion even in the face of a government crackdown on the street demonstrations. In the days following the

April 6<sup>th</sup> protest, the Facebook group wall became an important forum to share multimedia and news reports about the protest. Despite government attempts to prevent journalist from covering the protest, online media outlets provided protestors with an opportunity to share information which was then republished and aggregated on the group wall.

The data collected on April 6<sup>th</sup> and April 7<sup>th</sup> showed a continued trend displayed during the two-week constructed sample. Information hyperlinked largely centered on the activity and output of the group and not information about the wider Egyptian political sphere.

Another interesting finding during the April 6<sup>th</sup> and April 7<sup>th</sup> days of data collection was that despite the arrests of active, offline protestors, there was no substantial drop-off of activity. If top users were solely responsible for the activity of the group, their arrest should have resulted in a decrease of overall activity. This was not the case. The vacuum created by the arrest of top users resulted in a new set of top users. There was still a clear power law distribution of participation among users, but the group of top users shifted. This result is a manifestation of one of the most important features of the group – because there is no official hierarchical structure, the removal of opinion leaders does not result in a collapse of the group. The group can organically shift in response to the removal of top users and stay responsive to external events.

## CHAPTER 7: CONCLUSION

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The April 6<sup>th</sup> movement received considerable attention in international media. It's effective organization and mobilization of a large number of individuals was certainly impressive and showed potential for the use of the internet for bypassing traditional repressive measures that sought to prevent freedom of association, opposition to an entrenched government regime, and access to information. And while the present study does not rule out the possibility of internet usage playing a larger role in future political activity, it does cast doubt on the ability of the internet to form ad hoc spheres for discussion between a wide-swath of society. This coupled with the unclear relationship between online and offline activity and the level of commitment of those engaged in online dissent dampens the technological deterministic view of the internet as the inevitable liberator of repressed political organization.

The research questions proposed in this paper were four fold. *What type of hyperlinks do users post to the April 6<sup>th</sup> Facebook group wall? Is the April 6<sup>th</sup> Facebook group wall dominated by a small group of highly active members? If so, do these top users post similar proportions of the same types of hyperlinks as other members? How does the activity of the group change during days with particular political import?*

The present study confirms that certain users of the group studied disproportionately influence that group's discursive space. These top contributors are responsible for the republishing of a vast amount of media to be viewed by the group as a whole. This media varies in type, but largely drives the discussions in the group and largely centers on the official organization that has been developed as the group has grown in size and power. While there was less alternative offline journalism posted than was expected, the force of a small group was conclusively determined.

The study also affirmed that in the face of relevant external political events, the volume of activity and, by extension, discussion, increased substantially showing that the group is in touch with the larger political context. The response of the group to the return of an influential figure showed the power of the group to garner support for movements outside of the group itself. This form of political capital is an important reflection of the potential power of online organization. The content produced during the third annual April 6<sup>th</sup> protest, displayed the ability of the group to stay relevant,

and the ability of previously less active members to take the place of top users detained during the demonstrations.

Despite the confirmation of the proposed hypotheses, there were several questions left unanswered, and more posed during the course of the study. The inability to adequately answer some questions was a result of the methodological limitations of the research.

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#### LIMITATIONS OF EFFECTIVENESS OF ONLINE POLITICAL ORGANIZATIONS

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While the purpose of research analyzing the structure of an online organizational tool is ultimately designed to assess its effectiveness as a political instrument, such an evaluation is outside of the present study. But any conclusions regarding the effectiveness of this type of online organizational capacity must be mitigated by the possibility of government surveillance and outright shutdown of the Facebook website. While high profile, aggregated online activity adds to the security of the group as a whole, it can also lead to more vulnerability because of its centralization.

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#### REMAINING QUESTIONS AND AREAS OF FURTHER STUDY

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Does the organic formation of hierarchy based on a participation model of power in turn create an official hierarchical structure that could rival the rigid hierarchical structure of traditional offline groups? Would the creation of a hierarchy make the group more or less effective at mobilizing offline demonstrations and support?

These types of questions are crucial to understanding the impact of online political organization as it effects the real-world political environment. AN analysis of the impact of online organizations over time is an important research issue that should be addressed as online political movements continue to grow. This would require an in-depth political evaluation of a group's activities and their impact and how both of these correlate with the online structure of the group's members.

Are individual leaders needed to galvanize a group? Without a figurehead to lead an online group, repressive regimes are limited in their ability to cauterize trends for calls for reform. Is it more valuable for a group to have a lead figure that can

mobilize activists, concentrate efforts, and represent a group in discussions? Or is preferable that a group act as an egalitarian entity?

An offline case study would also help in an evaluation of the correlation between high activity in a given group and high activity in the offline environment. Whether online activists transcend online and offline worlds to enact change and galvanize supporters is an important issue to discuss in regards to the medium's capacity for changing real world situations.

Another potential study requiring extensive technical resources would be an analysis of the impact that a hyperlink posted to a specific Facebook group has on that webpage actually being visited. The nature of hyperlinks requires that they actually be linked to for an internet user to view the content. A study of the page visits of a particular site as a hyperlink to that site is posted would provide insight into how valid the gatewatching theory, and by extension the online agenda-setting theory, is when used to study online social networking.

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#### LIMITATIONS OF METHODOLOGICAL DECISIONS

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The limited resources and time dedicated to the project inevitably limited its scope. In the process of collecting and analyzing data it became clear that there were several avenues of interest that were necessarily closed off due to these limitations. Though the three, single-day samples provided an interesting contrast, a much more complex and sustained cross-longitudinal study would have been preferable to the more ad hoc selection of appropriate sample days.

Another major obstacle to more generalizable and interesting results was the language barrier. While volume and categorization of the data collected was effective at drawing certain conclusions, a content analysis would have been far more fruitful in analyzing the data.

The lack of a systematic multivariate analysis also required that certain decisions be made in regards to who comprised the group of top users. While the intuitive approach and the use of the distribution of the volume of participation was effective for a comparative study of the group as a whole and the most highly active

contributors, a more mathematically based approach would have yielded more reliable results.

A third drawback of the methodological structure of the research presented here is the lack of quantifiable impact of the agenda as it was set. A cross-longitudinal content analysis would have shed light on the extent to which the agenda-setting actually impacted the group discussion. While analyzing agenda-setting, opinion leader activity, and gatewatching theory does not automatically require an analysis of the effect of their applications, it is helpful to see how these trends actually impact the discussion.

The importance of understanding the impact and not just the modality of the group's top users also extends to the offline sphere. A correlative case study of offline activity stemming from online organization would have contributed greatly to the value of the present research. Qualitative interviews and participatory observation were not possible given the language barrier between the researcher and the subjects and the limited amount of time available to carry out the project.

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#### IN SUMMARY

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While these unanswered questions are important to further understand the impact of social networking on information exchange as it relates to offline political contexts, the current study does provide insight into the structure of communication in one particular group. It is a first step to understanding the role that online social networking can play in repressive political systems where media and opposition movements are limited in their capacity to unite citizens in an effective and open public sphere. Despite the skewed levels of participation of group members and the impact of a small number of users over the discursive space, the promise of such organizational tools should not be underestimated. Literature hailing the internet as a democratizing force (Benkler 2006) may overreach in their technological determinism, but the availability of previously unformed discursive spheres marks a promising shift in traditionally repressive media environments. Their effectiveness in enacting overarching change, specifically in Egypt, is yet to be seen, but their potential applications are worthy of attention and analysis.

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